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VOLUME II OF III
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In The
United States Court of Appeals
For The Federal Circuit

SOVERAIN SOFTWARE LLC,

FILED
U.S. COURT OF APPEALS FOR
THE FEDERAL CIRCUIT

Plaintiff-Appellee,

v.

APR 21 2011

JAN HORBALY
CLERK

NEWEGG INC.,

Defendant-Appellant.

APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS IN
CASE NO. 07-CV-0511, JUDGE LEONARD DAVIS.

JOINT APPENDIX

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SOVERAIN SOFTWARE, LLC v. NEWEGG INC, NO. 2011-1009

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1 any means?

2 A I was not.

3 Q Have you ever testified in court before?

4 A This is my first time in a courtroom.

5 Q It's a little intimidating, isn't it?

6 A It is.

7 Q It's not what you expect. We will try to make
8 it easy for you.

9 A All right. Thank you.

10 Q Mr. Sayles can be kind of rough, but he can't
11 eat you, so you will be okay.

12 The -- how long did you stay at Latham &
13 Watkins?

14 A A little over three years.

15 Q And what did you do when you left Latham &
16 Watkins?

17 A I left Latham to go to work for a company
18 called Divine in Chicago.

19 Q All right. So this is the Divine that we've
20 heard talked about a little bit before?

21 A The very same, yes.

22 Q Okay. Tell us a little bit about Divine.

23 What kind of company was it?

24 A Well, it was an internet-focused -- originally
25 an investment company. And it was 1999. You know, the

1 climate was very good for internet companies, and this
2 was a very exciting company to be part of in Chicago.

3 Q Did -- was -- was Divine just getting started?
4 Had it just been formed?

5 A It was -- yes, it was a startup.

6 Q Who was the founder of Divine?

7 A Andrew Filipowski.

8 Q And tell us a little bit about Mr. Filipowski?

9 A He went by Flip. It was easier to say than
10 Filipowski, I guess. And he was -- had been previously
11 the chairman and CEO of a company called Platinum
12 Technology in Chicago. Very successful company. I had
13 done a lot of legal work for Platinum previously, so I
14 came to know him. And Platinum had grown very rapidly
15 through acquisitions of great technology companies and
16 had just been sold for \$3-1/2 billion shortly before
17 Divine was formed.

18 Q And how did -- what was the business plan at
19 Platinum? What had he done to, in a couple of years,
20 build an enterprise that sold for \$3-1/2 billion?

21 A These were very smart judges of software
22 technology and were able to acquire companies and put
23 them together and then develop those products together
24 and sell them very successfully in the marketplace.

25 Q So, I think he put -- integrated about 70

1 Q Well, tell us what happened over the next
2 couple of years. Starting in 1999, what happened over
3 the next couple of years?

4 A Well, the company was formed in 1999. We
5 raised, as I said, a lot of capital. We went public in
6 the mid-part of 2000 and raised another 400 million or
7 so. So we had a big war chest.

8 And from there we started acquiring companies
9 and trying, as best we could, to -- to pick the right
10 companies and put them together and integrate them
11 successfully.

12 Q How big did Divine get at its peak?

13 A At its peak we were about 3000 employees. I
14 think we had 50 or so software products, somewhere
15 between 6 and \$700 million in revenues.

16 Q How many locations worldwide?

17 A I don't know. Many.

18 Q More than 20?

19 A Yes.

20 Q Did Divine also form alliances with other
21 companies?

22 A We did. That was one of the ways that you
23 would sell software is you would work with other
24 technology companies. And we did work with Microsoft
25 and IBM, Hewlett-Packard, Compaq, Dell; all the big

1 A Yes. As I said, I was on the -- in the
2 corporate development organization, which was the
3 organization that's tasked with identifying good
4 companies and going out and investigating their -- their
5 capabilities and then negotiating a deal to acquire
6 them.

7 Q Okay. Did you, as part of your investigation,
8 learn about Open Market and the technology that it owned
9 and the products that it had?

10 A Yes..

11 Q And the decision was made to purchase Open
12 Market?

13 A Correct.

14 Q Okay. And do you recall when that was?

15 A I think it was in mid-2001.

16 Q Okay. The -- do you recall what Divine paid
17 to purchase Open Market?

18 A It was approximately \$70 million.

19 Q \$70 million?

20 A 70.

21 Q Now, we've heard some references to it, and I
22 want to put it back in the time frame, but everybody's
23 heard, I guess, of the dot-com bubble. Give us your
24 description about what that era was in the late
25 '90s/early 2000 period.

1 A Well, the dot-com bubble related to internet
2 companies, and there were lots of companies that were
3 forming and growing very rapidly and going public. This
4 was in the late '90s. And the bubble, so to speak,
5 burst in mid-2000. And after that a lot of these
6 companies that had been very successful failed; a lot of
7 companies that had been worth a great deal of money,
8 suddenly were not and were laying off employees and
9 struggling to survive.

10 Q Okay. Did the dot-com bubble bursting, affect
11 Divine?

12 A It did, because we initially were focused on
13 investing in companies. But as the valuations came down
14 and companies became more available, we turned to
15 acquiring companies, because there just were so many
16 great technologies companies that we could afford
17 suddenly.

18 Q Well, what happened to Divine eventually?

19 A Eventually we grew too big too fast. We
20 didn't manage to make it, and we broke up and sold.

21 Q While you were successful in raising a whole
22 lot of capital, hundreds of millions of dollars
23 originally, after the dot-com bubble burst was there any
24 more -- anybody else willing to invest in this company;
25 put it that way?

1 A Well, we were -- we were public as well, so we
2 had investors in that regard. But it was a tough time.

3 Q What was kind of the last straw for Divine?
4 Was there a particular purchase made that required an
5 awful lot of immediate cash that just wasn't available?

6 A Yes. There was one company WorldCom that we
7 acquired somewhat -- it was heavily debated within the
8 corporate development team, but we did acquire them.

9 And because of the nature of their business,
10 it required a lot of cash. And it ended up being a big
11 problem for the company.

12 Q Now, when the financial troubles came down on
13 Divine, how did it affect these 35 subsidiaries that
14 they had already acquired? Did it have an impact on
15 them?

16 A Well, we had gone through -- in the process of
17 trying to integrate them, we had reorganized. We had
18 tried to kind of put products together and did a lot of
19 changes to try to survive.

20 Q Let me interrupt you to turn your mic a little
21 bit to the side again. You're having the same trouble
22 that Win did.

23 Were there cutbacks in employees, reduction in
24 staff?

25 A Yes.

1 Q All of the usual type of things?

2 A Yes.

3 Q Let's talk about Open Market in particular.

4 Did it go through a period of neglect due to
5 the financial strain on Divine?

6 A It did. It wasn't alone in that regard.

7 Because we had acquired so many companies and had so
8 many software products, as we were trying to integrate
9 and also get the company the right size, there was a lot
10 of products that just didn't get the attention; and Open
11 Market's Transact product was among them.

12 Q Okay. Did Open Market lose a lot of its
13 customers?

14 A It did.

15 Q Lose its engineering staff?

16 A A lot of the engineering staff did move on.

17 Q What eventually happened to Open Market and
18 the other various subsidiaries of Divine?

19 A The company was broken up and sold to
20 different investors.

21 Q Okay. That brings us to talking about
22 Soverain Software. Was Soverain Software formed by some
23 investors specifically for the purpose of purchasing
24 what was left of Open Market?

25 A Yes.

1 Q Who were the investors?

2 A The investors --

3 Q Who leads the industrial group, if you would?

4 A The investors were a group from New York that
5 were originally interested in buying a separate part of
6 Divine. And in the course of working with them on that
7 transaction, I suggested to them that there was an
8 opportunity they should also consider.

9 Q Okay. The -- tell us what your role was in it
10 coming about that Sovereign was formed to purchase Open
11 Market.

12 A Well, I had always thought of Open Market as
13 one of the best parts of Divine. When we acquired it, I
14 was very impressed with the product, the customers they
15 had, the history, the patent portfolio.

16 So when this kind of dismantling of Divine was
17 going on, I saw it as an opportunity, a business
18 opportunity that I thought with the right approach could
19 be very successful. So I suggested it to these
20 investors thinking perhaps they would be interested.

21 Q Okay. And they decided to follow your advice
22 then and purchase that asset?

23 A We did.

24 Q Now, you might recall hearing Mr. Sayles in
25 his opening statement saying that Open Market and

1 Transact had never been successful. Do you -- do you
2 share that view?

3 A I do not. I do not at all.

4 Q Tell us what your knowledge of Open Market's
5 success was with the product Transact in particular,
6 during the late '90s?

7 A Well, Open Market was not only, you know, very
8 well-known as a company, but its Transact product was --
9 was one of the very first E-commerce software products,
10 and it grew very rapidly. By 19 -- 1999 it commanded
11 over 30 percent of the E-commerce software market
12 dwarfing all the other competitors, including companies
13 like Microsoft and IBM. So from that perspective, the
14 Transact product was very, very successful.

15 Q I am looking at exhibit -- well, it's actually
16 got two exhibit numbers on it. It's already in
17 evidence, Plaintiff's Exhibit 149 and Defendant's
18 Exhibit 220. And I'm not going to bother putting it up
19 on the board or anything.

20 But this document is an Open Market report,
21 and it's an Open Market document, but it indicated that
22 Open Market's share from 1998 of the entire E-commerce
23 software program was 30 percent -- 29.8 percent.

24 A Correct.

25 Q Okay. Is that one of the facts that you were

1 aware of when the decision was made to purchase Open
2 Market for Divine?

3 A It was one -- one of the facts, as well as
4 their customer list.

5 Q Okay. Who were some of the customers that
6 Open Market had during the point of time that you were
7 investigating it to be purchased by Divine?

8 A Well, at the time we were looking at them to
9 purchase them for Divine, as you've heard Mr. Treese
10 testify, there were -- there were some of the biggest
11 companies in the world; AT&T, Disney, Sony, Time-Warner,
12 Business Week, the McGraw-Hill publishing companies.
13 There were very, very large companies.

14 Q And those are companies that had selected
15 Transact as the software to run their websites?

16 A Correct.

17 Q Okay. This same document indicates that big
18 competitors in '98 included Microsoft. Do you know
19 what -- do you recall what Microsoft's market share was
20 compared to Open Market's 29.8 percent?

21 A I believe at the time it was around two to
22 three percent of the market.

23 Q And this document actually says it was 3.7
24 percent. Does that fit?

25 A That sounds right.

1 Q Oracle's was 2.5 percent?

2 A Right.

3 Q IBM was 2.4 percent?

4 A Right.

5 Q Okay. Has that circumstance changed today?

6 A It's about reversed, yes.

7 Q When financial difficulties came and Open
8 Market's business fell under a period of neglect under
9 Divine's management, what happened with respect to
10 market share to these other -- the big boys, so to
11 speak?

12 A Well, Transact is a product that's -- it's a
13 very complex product. It's intended to run either large
14 companies' E-commerce websites or, in the case of
15 commerce service providers, to run a lot of companies'
16 websites. And there's changes that are needed to be
17 made on a constant basis.

18 And so what happened in the waning days of
19 Divine is that the engineering development that needed
20 to go on was not happening. Customers weren't getting
21 the support they needed, so they would logically make
22 the decision, especially when E-commerce needs to be
23 working to be successful, they would make the decision
24 to move to a different product or build their own
25 website.

1 Q Tell us what happened after you persuaded this
2 group of investors to purchase the Open Market assets.
3 And let me ask you what -- what assets did we purchase?
4 When we talk about purchasing Open Market, they didn't
5 just purchase patents, did they? What did you buy?

6 A It was the Transact software business, so it
7 was all of the source code and related documents that
8 went with the software product. It was all of the
9 customer contracts that we could recover. It was the
10 existing customer relationships with the customers that
11 was still there. And as well as the -- the related
12 intellectual properties, the patents for the most part.

13 Q Now, let me see how to phrase this. Was one
14 of the conditions that these investors made when you
15 were trying to persuade them to buy this business is
16 that you would agree to become the CEO and run the
17 company?

18 A That was the only condition they would invest
19 under, yes.

20 Q Okay. What did they tell you they wanted to
21 do after they hired you to run the company?

22 A Well, they wanted me to move as quickly as we
23 could to re -- you know, reengage an engineering team,
24 to reach out to the customers and try to get that
25 situation stabilized, and ultimately to make money.

1 Q Well, a little more basic than that. Like
2 every investor that buys a company, they want the CEO to
3 go make money.

4 A That's right.

5 Q And how do you make money with a technology
6 company such as Soverain? What -- what do you do? What
7 is your sources of making money when you have the kind
8 of assets that Soverain owns?

9 A If you're lucky enough to have a product, as
10 we do, you develop that product, you support that
11 product, you sell that product, and you make money from
12 that side of the business.

13 Q And the product -- the principal product at
14 least is Transact?

15 A That's correct.

16 Q Were there some other programs as well?

17 A There are some smaller programs, but Transact
18 is the main product.

19 Q All right. And what else can you do to make
20 money when you own a technology company?

21 A Well, in our case, I thought that the
22 licensing of the patents also would be a good business.

23 Q Okay. So if we can, we can kind of look at
24 it, there's two aspects of the business enterprise. One
25 is your software side, the software, the Transact

1 program that you can sell and service.

2 A Right.

3 Q Okay.

4 The other major asset is the patent portfolio
5 that you said you licensed; is that it?

6 A That's correct.

7 Q And how many patents does Sovereign own?

8 A Right now we have over 50 pending and issued
9 patents.

10 Q Okay. Is that worldwide or just in the United
11 States?

12 A Worldwide.

13 Q Including the patents that are the subject of
14 this lawsuit are three of those patents; is that right?

15 A Correct.

16 Q All right. You mentioned licensing. And,
17 essentially, when you own -- well, you've heard the
18 reference that has been made about a patent being like a
19 deed to real estate.

20 A Uh-huh.

21 Q But having a patent portfolio is like opening
22 an office building, and you can rent the right or
23 permission to use an office in the office building in
24 exchange for money?

25 A Correct.

1 Q And make money based on the asset that you
2 own; is that it?

3 A That's right.

4 Q And patent licensing is similar to that. You
5 give permission to another company to use the technology
6 that you have the exclusive right to?

7 A That's correct.

8 Q And that's called a license?

9 A Yes.

10 Q Now, let's talk first about the software side
11 of the business.

12 When you took over what was left of Open
13 Market, what -- what did you find? What kind of shape
14 was it in?

15 A It was -- it was a big challenge. I was it
16 initially. And so we -- initially, I needed to figure
17 out what there was that I could reconstitute. I needed
18 to hire an engineering team; and we had customers
19 calling us saying, you know, we're using your product,
20 when are you going to start supporting it, investing in
21 it.

22 Q Did it have an established office somewhere?

23 A There was no office, no.

24 Q Did it have any employees left?

25 A No.

1 computer like a CD; is that correct?

2 A Not even close.

3 Q This -- as Mr. Treese indicated, you -- it
4 requires continuous maintenance and updating; is that
5 right?

6 A That's correct.

7 Q So if I was going to find out what it would
8 cost me to own a copy of Transact, what are the types of
9 expenses or costs involved in using a products -- the
10 product Transact?

11 A Depending on your type of business, you would
12 first need to figure out how large of a license you
13 needed. Then there would be the integration and
14 installation charges that would go, because you have to
15 connect that software, install that software and connect
16 it to the other parts of your business so that you're
17 able to sell things online. And then there is the
18 annual maintenance and support that allows you to get
19 updates to the product and custom engineering help and
20 things like that over time.

21 Q So there were some questions about the
22 licensing fees. And that is a fee for the right to use
23 the software, the license fee?

24 A Right.

25 Q And that's an initial upfront cost?

1 A Correct.

2 Q And how is that -- is it still a two-tiered or
3 two types of structures as Mr. Treese described Open
4 Market did?

5 A Yes, we still sell the product that way.

6 Q All right. And -- and what is the cost of a
7 license, just the bare license, and how is it priced?

8 A We price Transact for an enterprise customer,
9 kind of the basic license, it's based on the amount of
10 computing power they need, extent of use, how big the
11 site is going to be since it's per CPU.

12 Q The \$150,000 number that you heard from
13 Mr. Treese, is that still the same number or has it
14 changed?

15 A Yes.

16 Q But it's per CPU; is that right?

17 A That's how we price it, yes.

18 Q And CPU stands for?

19 A Central processing unit.

20 Q Central processing unit?

21 A Or computer processing, I'm sorry.

22 Q So is the first thing you have to determine is
23 how many -- how large the site's going to be, how many
24 CPUs or central processing units it's going to require?

25 A Uh-huh.

1 A That is correct, yes.

2 Q All right. Well, let's turn now and talk a
3 little bit about the other side of Soverain's business,
4 and that is their property, their intellectual property,
5 their patents, and your licensing program.

6 How long did it take you and Ms. Andrysiak to
7 get the software side stabilized enough where you could
8 turn your attention over to the patent portfolio?

9 A Probably four to six months before we were
10 able to look toward the patents.

11 Q All right. Now, how do you go about doing the
12 licensing or patent licensing part of the business? Do
13 you do that entirely in-house, or do you have outside
14 help?

15 A It requires outside counsel.

16 Q Okay. So you employ outside counsel to assist
17 you with the licensing process?

18 A That's correct.

19 Q And what does that entail? What kind of work
20 do those lawyers do and the consultants that they hire?

21 A We have to figure out who might be a possible
22 licensee. We have to analyze, to the extent we can, the
23 way their system operates on the web, and then we have
24 to file suit.

25 Q Okay. How do you go about -- when you've

1 identified somebody that you believe is using your
2 patented technology that you think should be paying for
3 the right to use your technology, how do you go about
4 convincing them to do it?

5 A Well, it used to be that you would send
6 letters or you'd get in contact with them somehow, and
7 you would say, we would like to engage with you in a
8 licensing conversation regarding certain patents.

9 Q Okay. So you'd tell them you think they need
10 a license and ask them to sit down and have a business
11 conversation?

12 A Right.

13 Q But you don't do that anymore; is that right?

14 A No.

15 Q In today's legal culture?

16 A Yeah. The rules have changed in recent years
17 especially, that if you were to -- especially as a small
18 company -- to contact a company about licensing your
19 patents, that it would leave you open to being sued
20 immediately.

21 Q So they can file a suit to claim your patents
22 invalid, and they get to pick where they file it.

23 A Correct.

24 Q And if you contact several companies, you may
25 wind up defending the validity of your patents from

1 Seattle to Florida --

2 A That's right.

3 Q -- to California --

4 A Which --

5 Q -- right?

6 A -- we just can't afford.

7 Q So the situation now is, I guess, you sue

8 first and talk later?

9 A Unfortunately, yes.

10 Q All right. Now, with this system, have you

11 successfully licensed your patents?

12 A We have.

13 Q All right. Give the jury an indication of

14 some of the major retailers in online shopping that have

15 taken a license, even though they got contacted first

16 with a lawsuit.

17 A Well, Amazon, Gap, Zappos, TigerDirect,

18 Shutterfly, Redcats USA.

19 Q All right. Do you consider your licensing

20 program then to be successful?

21 A I do. We do.

22 Q And the fact is that I guess out of the first

23 seven companies that you have tried to persuade to get a

24 license, six of them now have a license?

25 A That is correct.

1 A You may.

2 Q You answered some questions to Mr. Roth about
3 the installation of Transact, the hookup and
4 installation.

5 Do you recall that subject?

6 A I do.

7 Q Isn't it true that Soverain has not licensed
8 the Transact product to any licensee that was not first
9 licensed by Open Market?

10 A I said as much, yes.

11 Q So with respect to these hookups and
12 installations, since around 2001 there haven't been any
13 new customers of Transact; isn't that right?

14 A That is correct.

15 Q So we have a nine-year period where there have
16 been no new customers who have gotten a hookup or an
17 installation of this Transact product?

18 A That's not correct.

19 Q No new customers that weren't first licensed
20 by Open Market?

21 A That part is correct.

22 Q All right. And Open Market, to be clear,
23 began selling Transact in 1996. You know that history,
24 don't you?

25 A I do.

1 Q And the Transact product actually incorporates
2 and reflects each of the claims that are asserted in
3 these patents in this case; isn't that right?

4 A The Transact product was developed at that
5 time, yes.

6 Q And Open Market's assets were purchased by
7 Divine in 2001; isn't that right?

8 A Yes.

9 Q And since then, Divine has gone out of
10 business; is that right?

11 A Yes.

12 Q And you indicated to the jury that Open Market
13 was successful with Transact. But the fact is, Open
14 Market never made a profit with Transact; isn't that
15 right?

16 A Open Market was operating at a time where
17 companies took their money and put it into building the
18 business faster and faster. So Open Market may not have
19 been profitable, but the Transact product was
20 successful, which, I think, is what I testified.

21 Q All right. Let me restate the question that I
22 just asked you.

23 Even though Open Market sold the Transact
24 product, Open Market never made an operating profit;
25 isn't that so, ma'am?

1 A I don't know for certain, but I would guess
2 that to be the case.

3 Q Divine acquired the rights to Transact and the
4 patents from Open Market, correct?

5 A Divine acquired all of Open Market.

6 Q All of Open Market, which included Transact
7 and included the patents; isn't that right?

8 A That's true.

9 Q And even though Divine had those rights and
10 others, Divine lasted about 15 months; isn't that true?

11 A Divine was in existence for four years.

12 Q After it acquired Open Market, it lasted about
13 15 months; isn't that so?

14 A That's correct.

15 Q Would you agree that Newegg is not a
16 competitor of Soverain?

17 A For the most part, yes. With the launch of
18 Newegg Mall, arguably they're providing software to sell
19 online, so I guess you would consider that a bit of a
20 competitor.

21 Q But mostly Newegg would fall in the category
22 of what you would call a potential customer --

23 A Yes.

24 Q -- isn't that right?

25 A Yes.

1 Q And Mr. Roth brought this out, but even though
2 you would consider them a potential customer, they were
3 not approached about a license to Transact before the
4 suit was filed.

5 A That's correct.

6 Q These patents-in-suit have been licensed from
7 time to time; isn't that right?

8 A Yes.

9 Q So we're talking about two different types of
10 licenses: Patent licenses and then Transact licenses.

11 Two different things, right?

12 A Very different things, yes.

13 Q And with regard to the patent licenses --
14 licenses that have been entered into, isn't it correct
15 that they have all been lump sum except for one?

16 A There are over 40 licenses, and I can't say
17 I've got them all memorized, to be honest, but I would
18 say you're correct. The bulk of them are lump sum.

19 Q Okay. And by lump sum, what we mean is that a
20 party that's getting a license pays a negotiated fee
21 upfront for a license that extends the life of the
22 patent. That's the concept, isn't it?

23 A That's correct.

24 Q And that's contrasted from what's called a
25 running royalty where a party might pay on a transaction

1 basis or year to year, isn't it?

2 A Yes.

3 Q And from Soverain's standpoint, it would like
4 to have a running royalty in certain situations; isn't
5 that right?

6 A We are willing to entertain it, sure.

7 Q But the licensees, for the most part, have
8 insisted on these lump-sum licenses; isn't that so?

9 A True.

10 Q With respect to Transact, you've talked, in
11 response to Mr. Roth's questions, about ongoing fees.

12 Those ongoing fees are for maintenance and
13 services; isn't that right?

14 A The maintenance support ongoing fees are. We
15 also have customers who do custom engineering work, and
16 that's separate, and that can be ongoing.

17 Q And as a matter of fact, there are licensing
18 fees for those customers who do use Transact; isn't that
19 right?

20 A That's true.

21 Q And those, too, are, without exception,
22 lump-sum upfront amounts; isn't that so?

23 A I believe that's correct.

24 Q Ms. Wolanyk, you understand that the damages
25 are measured by a reasonable royalty, and that's what

1 A Yes. I think this has been used in a couple
2 of different examples in terms of talking about what a
3 royalty is. And we're all used to paying rent on a
4 house or rent on, you know, a car or something like
5 that. So when you have a house, there's a landlord and
6 a tenant. They enter into a relationship, and it's
7 usually a lease agreement, and that will be a payment
8 that would be in terms of rent is what it would
9 typically be.

10 Intellectual property is like a patent or a
11 trademark, something like that. Here we've got a
12 patent. The relationship there is a licensor, who owns
13 the patent, and then a licensee, he's who is going to
14 seek to use the patent. They enter into a license
15 agreement, and a royalty is paid for that.

16 So the royalty represents, basically, a rent
17 for that patent. You don't own the patent, but you're
18 paying a rent for your use of the patent.

19 Q As an expert, how do you go about deciding
20 what is a reasonable royalty to be paid by someone who
21 infringes a patent owner's rights?

22 A Well, there's several things. There is the
23 component of what's the royalty base; that's one
24 component. The other thing is determining what the
25 royalty rate is that you applied to that. And we will

1 be talking about that in a second.

2 The royalty rate is determined based upon a
3 review of some factors called Georgia-Pacific Factors.
4 There's 15 factors that came out of a decision about,
5 oh, back in the '70s that cited 15 factors. And that's
6 one of the considerations that I've made in determining
7 the royalty rate in this case, or royalty amount in this
8 case.

9 Q You did a Georgia-Pacific analysis in this
10 case?

11 A That is correct.

12 MR. SATINE: If we can please have the
13 next slide. Let's go back. I'm sorry. I'm getting
14 ahead of myself.

15 Q (By Mr. Satine) What information did you
16 review and consider as part of your Georgia-Pacific
17 analysis?

18 A Well, as I mentioned, there was various
19 information produced by Newegg, as well as by Soverain.
20 Open Market/Divine produced various information as well.
21 I looked at public information, went to the Newegg
22 website, and looked at -- did industry research as well
23 in terms of internet companies, their sales on the
24 internet.

25 Looked at public filings for Newegg. Read

1 various depositions, technical reports, other expert
2 reports. Had discussions with Mr. Grimes -- or Dr.
3 Grimes, I should say -- and Ms. Wolanyk. So I've done a
4 very complete analysis of information as well as
5 discussions.

6 Q One more thing before we get to your opinion
7 in this case. Did you make any assumptions for purposes
8 of reaching that opinion?

9 A Yes. The overall assumptions I made were that
10 the patents at issue are valid, they're enforceable, and
11 they are infringed by Newegg. As part of a damage
12 context, that's what the law provides, that we need to
13 make the assumption of validity, infringement, and
14 enforceability in order to provide the context of the
15 damages.

16 Q So the law requires you to make those
17 assumptions?

18 A That's right, within the context of a damage
19 analysis.

20 Q Now, I believe you have a demonstrative which
21 summarizes your opinion as to the royalty damages to
22 which Soverain is entitled, and that's up on the screen.
23 And we can also put one on the easel, because I think
24 we're going to keep coming back to this while we put
25 other things on the screen today.

1 MR. SATINE: Thank you.

2 Q (By Mr. Satine) Mr. Nawrocki, can you walk us
3 through this slide?

4 A Yes. This is the summary of royalty damages
5 that I've calculated based upon my analysis. This chart
6 summarizes that calculation.

7 On the left column you'll see the patents at
8 issue, the '314 patent and the '492 patents. And then
9 below that you will see the '639 patent. The '314 and
10 the '492 relate to the online sales system. And then
11 the '639 the session management patent. They've been
12 talked about quite extensively here.

13 The next column shows the royalty base. The
14 royalty base is over 28 million transactions. That is
15 shown in transactions -- it doesn't represent -- it's
16 not shown that way in this chart, but I think on the
17 overhead, at least on my document, shows transactions.

18 And that's what it represents.

19 Q You are correct. The one up on the screen
20 says transactions and the base and per transaction on
21 the royalty rate. And it's on the board. I apologize
22 for that.

23 A It represents transactions. So it's
24 28,316,504 transactions that are within the damages
25 base. And those are Newegg's completed transactions.

1 To that I applied the royalty rate of 80 cents for the
2 '314 and '492 patents -- and that's if either or both
3 patents are found infringed and valid, as well as
4 enforceable -- to arrive at the total of 22,653,203.

5 Then the same approach I used for the '639,
6 using a different royalty rate. So for the '639, the
7 same amount of completed transactions times the 40 cents
8 per transaction to arrive at 11,362,602.

9 The grand total of damages, based upon the
10 extent of that infringement, the extent of those
11 transactions, is 33,979,805.

12 Q I would like to start by talking about the
13 royalty base. The number 28,316,504 appears two times.

14 Why do we see it two times?

15 A Because the patents -- there is two different
16 sets of patents, as I mentioned. One is for the online
17 sales system; the other is for the session management.

18 And the same amount of transaction applied the
19 both. The same amount of transaction is accused of
20 infringing both patents.

21 Q Why is the royalty base the number of
22 transactions?

23 A That -- as we talked about earlier, we wanted
24 to look at the extent of use, or the use made of the
25 invention. I'm not sure if we had a few -- if you could

1 just go back, maybe go back a couple of charts, if you
2 would. One more. Yes.

3 So if you look at the bottom line for use made
4 in the invention by the infringer, that use made was a
5 lot of transactions, over 28 million transactions.
6 That's what that represents.

7 Okay. You can go back.

8 Q And you have some slides about use.

9 MR. SATINE: Let's go to the next slide
10 after this one.

11 Q (By Mr. Satine) This is entitled During
12 Infringement Period. Can you explain that to us?

13 A Yes. So what I've shown on this chart is
14 Newegg's extent of use during the infringement period.
15 There was some discussion a little bit earlier about the
16 hypothetical negotiation, which we will talk about in a
17 second here, starting in early 2001.

18 So this shows their completed online sales
19 transactions -- that's Newegg's completed online sales
20 transactions -- from '01 all the way through 2010. I've
21 estimated it through April of 2010. I think they
22 provided us information through March. I estimated it
23 through April 30th, basically at the end of this trial.

24 Q Where did you get this information that we're
25 seeing on this chart?

1 MR. ROTH: Ask him to move the microphone
2 closer. When he looks away, we can't hear you at all.

3 THE WITNESS: What about if I turn it
4 this way?

5 MR. ROTH: We're having a lot of trouble
6 getting the right distance from it.

7 Q (By Mr. Satine) Okay. We've now talked about
8 the royalty base, so let's turn to the royalty rates.
9 You have two royalty rates, 80 cents and 40 cents. What
10 kind of analysis did you do to determine those rates?

11 A As I mentioned, I looked at the
12 Georgia-Pacific Factors, which have been identified in a
13 prior case. What we have on the overhead here is a list
14 of those factors. It comes from a case called
15 Georgia-Pacific versus U.S. Plywood.

16 And that was a case -- the case went on in the
17 '60s, but the decision -- one of the decisions that
18 listed out these factors was in 1970. So, it's been
19 around for 40 years now. And it lists out 15 factors,
20 and those are shown on the right side there.

21 Q Okay. And we have -- you prepared this slide,
22 which is easier to look at than trying to work through
23 those 15 factors as written by the Court.

24 MR. SATINE: Which we'd have to go up.
25 There we go.

1 Q (By Mr. Satine) And what's the purpose of this
2 slide, if you could just tell us that?

3 A So this slide is a summary of those factors.
4 And I have put them into several groups for discussion
5 here today. So this relates to the 15 factors. It's
6 adapted from the Georgia-Pacific case. I have put them
7 in several different groups.

8 The numbers that are shown on here coincide
9 with the numbers that were in the Georgia-Pacific case.
10 So I put them in groups of licensing factors, financial
11 and business factors, technical factors, and then other
12 considerations as well.

13 Q Okay. Now, we've heard a bit about
14 hypothetical negotiations. That's factor No. 15 over
15 there on the right. Why don't we start with that.
16 First of all, what is a hypothetical negotiation?

17 A There's been some discussion about a
18 hypothetical negotiation. And in a damages context,
19 what that refers to is that, because the parties haven't
20 agreed for a license in the real world, we have to go
21 back and do a hypothetical negotiation as one of the
22 factors. Go back in time, the time of the first
23 infringement, and determine what the parties would have
24 agreed to between a licensor and a licensee as a
25 business proposition. So that's what that refers to.

1 Q Is a hypothetical negotiation the same thing
2 as a settlement negotiation?

3 A No, it's not. Because the parties haven't
4 settled the case and worked out a license, you've
5 basically got to do this hypothetical construct. It's
6 quite a bit different.

7 Q What if the parties of this hypothetical
8 negotiation cannot come to an agreement?

9 A That's the difference. In a real world
10 negotiation, one of the parties sometimes says, I'm not
11 going to take a license, you know, I'm not going to do
12 it.

13 In a hypothetical negotiation, you have to
14 work out an agreement in terms of what makes sense based
15 upon the use that's at issue, based upon the parties'
16 position at that time.

17 Q Tell us about the hypothetical negotiation in
18 this case. Who's there, what are they thinking, what's
19 going on?

20 A So we've heard some discussion about it, but
21 let me try the put in it context here.

22 So what we have is we have Open Market, who's
23 at one side of the table, and Newegg is on the other
24 side. This is basically in late 2000, early 2001. I
25 understand that Newegg introduced this website with the

1 accused technology in early 2001.

2 So what's the situation for Open Market? Open
3 Market had had thousands of licensees in the past.
4 We've heard that during the years they had tremendous
5 success, and then they started decreasing.

6 So at this point in time Open Market, had
7 already licensed, I think, over 10,000 licensees. They
8 had licensed several large companies that you heard
9 discussion about. They had a market share that
10 approached 30 percent compared to Microsoft and IBM. So
11 their technology was being used. There was some
12 discussion about their Transact software and how
13 successful that was at that time.

14 So that presents one side of the fence.
15 Newegg had used -- I'm sorry, Open Market had used
16 several different licensing scenarios for themselves,
17 including licensing software sometimes. They also had
18 some per-transaction-type licenses they did as well.

19 On the other side is Newegg. As was
20 mentioned, they were starting on this new venture into
21 selling products on the internet. As I understand it,
22 they were making computers and trying to make computers,
23 but now they were going to jump into the internet and
24 would need technology to facilitate this.

25 So they would be anxious to obtain technology

1 that they were allowed the use on their business plan
2 and their business venture to be able to have an
3 efficient process for their customers. So they would be
4 anxious for the technology.

5 Open Market would realize they had valued
6 patents. The patents had already issued. So that would
7 be the construct of the negotiation at that time.

8 Q At this hypothetical negotiation, what
9 information do each of the parties have about the other
10 party?

11 A It's been called a card dealt face-up. So
12 it's like you're playing Texas Hold'em, and all the
13 cards -- everybody's cards are dealt face-up. So
14 everybody knows the other party's information. In the
15 real world that doesn't happen. Some parties might keep
16 certain information to themselves.

17 But in this construct, you basically say
18 there's no hiding any information; everything is dealt
19 face-up.

20 Q Okay. So we have this hypothetical
21 negotiation, Open Market, Newegg, cards are face-up.

22 Okay. Then we have other factors to look at.
23 So let's start with the licensing factors.

24 MR. SATINE: Let's go to the next slide
25 that you have.

1 Q (By Mr. Satine) Okay. Now, explain the first
2 bullet point on this slide.

3 A So this provides a summary of the different
4 licensing factors and the points related to those.

5 So, for the first one in 1998, this is a
6 couple of years before the hypothetical, Open Market
7 began encouraging companies to voluntarily take licenses
8 to its newly-issued patents.

9 I think earlier there was a Wall Street
10 Journal article talking about the fact that they had
11 just received the patents. And they sought to receive
12 licensees for their patent. They invited people to seek
13 a license.

14 Q Okay. Now, we've been hearing about the
15 Johnson & Johnson agreement. So if you could turn to
16 Exhibit P-185 in your binder which is up there in front
17 of you.

18 MR. SATINE: And if we could put that
19 cover of that agreement on the screen.

20 Q (By Mr. Satine) This is the one that
21 Ms. Wolanyk was discussing with counsel just a little
22 while ago. If we look at the bottom of the first page
23 of the license agreement, I think it's Paragraph 1(c),
24 does it tell us which patents Open Market licensed to
25 Johnson & Johnson?

1 A Yes. At the bottom section there, (c), you
2 will see that the licensed patent that's part of this
3 agreement referred to that, what's called the '780
4 patent, including divisionals, continuations, and
5 reissues and foreign counterparts.

6 As I understand it, the '780 was the
7 predecessor to the '639.

8 Q Does the license that was given to Johnson &
9 Johnson by Open Market include a license to practice the
10 '314 patent?

11 A No, not to my knowledge.

12 Q So does the license that was given by Open
13 Market to Johnson & Johnson include a license to the
14 '492 patent?

15 A Not to my knowledge.

16 Q And, by the way, was this the Johnson &
17 Johnson or some subsidiary of Johnson & Johnson?

18 A It was a subsidiary of Johnson & Johnson. If
19 you look at the very top portion --

20 THE WITNESS: Maybe you can blow that top
21 portion up.

22 A -- it mentions Johnson & Johnson Vision
23 Care.

24 THE WITNESS: If you can highlight that.

25 A They are located in Florida. Whereas, Johnson

1 & Johnson corporate is located up in the northeast. But
2 this would be their vision care subsidiary presumably.

3 Q Now, Mr. Roth and Ms. Wolanyk talked about the
4 fact that this was a hundred thousand dollar payment.

5 Mr. Nawrocki, if Johnson & Johnson paid a
6 hundred thousand dollars for a license to use the '780
7 patent, why don't we simply stop the testimony right
8 there and say, Newegg shouldn't have to pay any more
9 than that?

10 A Well, this is for a whole different type of
11 use, as was talked about. This is for internal use for
12 Johnson & Johnson. As we know, Newegg has been selling
13 computers, electronics on the internet to consumers.
14 This is for internal use for Johnson & Johnson, and it
15 specifically refers to that within the context.

16 So it doesn't show what the volume of the
17 transactions were, or if there were any transactions. I
18 assume there weren't. These are internal transfers
19 using the session management patent. But, to my
20 knowledge, there's no third-party transaction that would
21 be anywhere close to the 28 million they are talking
22 about here. In fact, I think they are specifically
23 prohibited.

24 Q Taking into consideration the hundred thousand
25 dollars that Johnson & Johnson Vision Care paid to Open

1 Market, do you still think that you've shown the jury

2 what is a reasonable royalty in this case?

3 A Yes. The 33 million that I have calculated,
4 33.9 million, is still an appropriate calculation. The
5 hundred thousand is something I considered. But once I
6 read the agreement, I realized that it was for internal
7 use, and it was not for third-party use such as the
8 transactions that Newegg has had.

9 Q Let's go back to the slide with your bullet
10 points on licensing factors. Let's go to the second
11 bullet point.

12 Tell us about that.

13 A Yes. The second bullet point is that in early
14 2001 -- so this is after the hypothetical -- Open Market
15 began to enforce its patent rights against Intershop.
16 Intershop was a competitive company. It sold software
17 as well. It wasn't like Newegg that's selling products.
18 They were selling software as well.

19 So Open Market realized that and began
20 enforcing their rights against Intershop.

21 Q When you say began enforcing their rights
22 against Intershop, what does that mean?

23 A I think what Ms. Wolanyk mentioned is they
24 filed suit against Intershop in early 2001.

25 Q They filed a patent infringement suit?

1 A That's correct.

2 Q And did Open Market and Intershop settle that
3 lawsuit?

4 A Yes, that's my understanding.

5 Q As a result of the settlement of that lawsuit,
6 did Open Market and Intershop enter into a patent
7 license agreement?

8 A That's my understanding.

9 Q Okay. Well, the attorneys have agreed not to
10 discuss the terms of any license agreement that resulted
11 from the settlement of a lawsuit. So we're going to
12 move to your third bullet point.

13 MR. SAYLES: Excuse me, Your Honor. I'm
14 going to object to the sidebar remark of counsel there
15 and ask the Court to instruct the jury to disregard
16 that. That was improper.

17 THE COURT: All right. Restate your
18 question, Counsel.

19 Q (By Mr. Satine) Mr. Nawrocki, if you could
20 just move to the third bullet point on that chart and
21 please explain that to us.

22 A Yes. The third bullet point talks about the
23 fact that Open Market, who we've been talking about,
24 Divine, who acquired the patents from Open Market, and
25 then Soverain had licensed one or more of the patents at

1 issue in this case more than 40 times. These patents
2 have been licensed more than 40 times, including several
3 large internet retailers.

4 There's a bunch of licenses to some small
5 companies; there was also some licenses to some large
6 companies. The large internet retailers included
7 amazon.com as well as The Gap.

8 Q Well, we've talked about patent licenses that
9 were granted by Open Market. So let's talk about some
10 of the Divine licenses, and the jury has heard about
11 some of those.

12 In doing your Georgia-Pacific analysis, did
13 you review the patent licenses that were granted by
14 Divine with respect to the patents-in-suit?

15 A Yes, I did.

16 Q Okay. If we could turn -- if you could turn
17 to Exhibit P-194 in your binder.

18 MR. SATINE: And we are going to put the
19 cover page of that up on the screen.

20 Q (By Mr. Satine) And P-194 is the license
21 agreement between Divine and Katco Industries, Inc. Do
22 you have that in front of you?

23 A Yes, I do.

24 Q And if we could all turn to Page 2 and look at
25 Paragraph 7.

1 MR. SATINE: If we can expand that on the
2 screen.

3 Q (By Mr. Satine) Do we see how much money Katco
4 Industries paid to Divine for this patent license?

5 A Yes. It says here under Section 7 that Katco
6 paid a one-time payment of \$1,000. It's a fairly small
7 payment, which represents -- the licensee represents, so
8 Katco represents at least 10 percent of gross profit of
9 sales of product over the internet. So as shown here,
10 Katco was a fairly small company and user of the
11 technology.

12 Q So -- just so -- make sure I did my math
13 right. If Katco paid \$1,000, which was at least 10
14 percent of gross profit of sales of the product over the
15 internet, that means Katco's gross profit of sales of
16 product over the internet was no more than \$10,000?

17 A That's correct.

18 Q Mr. Nawrocki, if Katco paid \$1,000 for this
19 patent license, how can close to \$34 million be a
20 reasonable royalty in this lawsuit?

21 A Because of the difference in use made. We
22 talked about the use made there being fairly
23 insignificant. Here we're talking about a lot higher
24 volume of sales, as well as transactions.

25 Q If you could turn to another of the Divine

1 licenses which is in your book. It's Exhibit P-199.

2 And, again, we're going to put the cover page up on the
3 screen, so we can all look with you.

4 MR. SATINE: And if you would blow that
5 first paragraph up.

6 Q (By Mr. Satine) This is an agreement between
7 Divine and Odimo, Incorporated?

8 A That's correct.

9 Q Now, we're going to turn, if we can, to Page 2
10 and look at Paragraph 7. I'd like to take a look at how
11 much Odimo paid Divine for this patent license. Can you
12 supply that for us?

13 A Sure. So within Paragraph 7 of this license,
14 it shows that licensee, that's Odimo, shall pay to
15 Divine the sum of \$30,000. And then it also says that
16 it represents a royalty of approximately 85 cents per
17 shopping cart transaction made last year on their
18 websites.

19 Q And in the next sentence there, something in
20 parenthesis. What does that refer to?

21 A Actually, within that context of that sentence
22 it says that it's represented by the licensee, so Odimo
23 said that they had approximately 35,000 transactions.

24 Q If Odimo paid Divine \$30,000, how can an
25 amount close to \$34 million be a reasonable royalty in

1 this case?

2 A All right. I know this has been discussed,
3 and some of these things were shown in court earlier
4 about these different bars on these different amounts.
5 But if you take a look at it, it's \$30,000 for the
6 35,000 transactions. As you can see, that's 85 cents a
7 transaction.

8 So what I've calculated here is 80 cents and
9 40 cents a transaction. Due to the significant
10 difference in volume, that represents the difference for
11 the magnitude of the damages that are at issue in this
12 case.

13 Another way of looking at it, if you look at
14 the number of transactions there, it's 35,000. Here you
15 have 28 million. It's several hundred times more
16 transactions at issue from Newegg, several hundred
17 times -- I think it's 800 -- little bit more than 800
18 times the amount.

19 Q Let's look at just one more of the Divine
20 licenses.

21 If you could turn to Exhibit P-202 in your
22 binder.

23 MR. SATINE: Once again, please put the
24 first page up for the rest of us to look at it.

25 A The exhibit number again, Mr. Satine?

1 Q (By Mr. Satine) 202.

2 A Okay.

3 Q You have your copy?

4 A I have it.

5 Q And this is an agreement with a company called
6 Webster Orchard, Inc. And, again, if you could turn to
7 Page 2, Section 7, and if you can tell us how much money
8 Webster Orchard paid to Divine?

9 A It says they shall pay to Divine -- licensees
10 shall pay to Divine, if you look at the center portion
11 there, a one-time payment equal to 2 percent of \$100,000
12 of gross sales of product over the internet. So \$2,000.

13 Q Does that mean that Webster Orchard had a
14 hundred thousand dollars of gross sales?

15 A A hundred thousand dollars of gross sales of
16 product over the internet.

17 Q And they paid 2 percent on those sales?

18 A That's correct.

19 Q Well, if Webster Orchard was supposed to pay 2
20 percent of this hundred thousand dollars of sales, gross
21 sales, how can you say that close to 34 million dollars
22 is a reasonable royalty in this case?

23 A Again, just because the differences in the
24 use. The hundred thousand dollars is a lot smaller
25 amount than Newegg has sold over the internet. We will

1 see in some other charts that there has been billions of
2 dollars of sales over the internet.

3 Q And if there are billions of dollars of sales,
4 do we have any idea if the number of transactions are
5 the same between Newegg and Webster Orchard?

6 A We don't have the amount of transaction for
7 Webster, so -- but presumably, for a hundred thousand
8 dollars in sales, it wouldn't be anywhere close to the
9 28 million that we have at issue here.

10 MR. SATINE: Let's go back to that
11 licensing factors slide.

12 Q (By Mr. Satine) And if you could explain the
13 last of the bullet points there.

14 A I think that's what we've talked about
15 already, the fact that Open Market, Divine, and Soverain
16 have licensed is significant.

17 Q Right. We've talked about Open Market and
18 Divine. You also mentioned Soverain up there. Can you
19 tell us about some of the Soverain licensees, who they
20 are?

21 A Yes. Soverain, as I think has been mentioned
22 by Ms. Wolanyk, has licensed several companies,
23 including Amazon, Zappos, several other companies as
24 well as Shutterfly.

25 Q Let's go to the next slide that's entitled

1 Technical Factors. Now, since you are not a technical
2 expert, do you rely upon Dr. Grimes for your conclusions
3 here?

4 A I do. I was here for Dr. Grimes' testimony,
5 and I heard his testimony about the patents. And so
6 this is, in part, related to his comments on the
7 importance of the technology.

8 Q I would like you to turn in your exhibit book
9 to Exhibit P-245, which is a document filed by Newegg
10 with the United States Securities and Exchange
11 Commission. And if you could turn to Page 78 of that
12 exhibit.

13 I would like you to read for the jury the
14 first paragraph under that heading Technology and
15 Intellectual Property.

16 A Okay. So this document is from, as you
17 mentioned, S1. And within the context of this, the
18 technology and intellectual property, this is Newegg's
19 document, it says that: Our technology systems are a
20 critical component of our success and are designed to
21 enhance efficiency and scalability. Our strategy is to
22 develop proprietary software and license technologies
23 from third parties as appropriate, in order to simplify
24 and improve the customer shopping experience, as well as
25 facilitate our fulfillment, financial, and customer

1 service operations.

2 Q Is that statement that Newegg made to the
3 Securities and Exchange Commission consistent with the
4 bullet points we saw on your slide relating to technical
5 facts?

6 A This talks about the importance of the
7 technology to Newegg. Newegg recognizes technology is
8 important, especially in their customer experience.

9 Q Let's go to the next demonstrative, which is
10 entitled Financial/Business Factors.

11 Can you please explain the first bullet point
12 on this?

13 A Okay. So the first bullet point is that:
14 Every Newegg completed transaction is assumed to be
15 infringing all three patents at issue.

16 We talked about that earlier. That relates to
17 the extent of use. This is for some of their completed
18 transactions. As I understand, all the 28.3 million
19 transactions are accused of infringing all three
20 patents.

21 Q What does the second bullet point refer to?

22 A The second bullet point is that Newegg has
23 become the second largest web-only retailer.

24 Some people may not have heard about Newegg
25 before this case. It was relatively new for me as well.

1 I had heard of Amazon. But as I became involved in this
2 case, I realized that Newegg was the second largest
3 web-only retailer. So they are a very large company,
4 has been quite successful with their internet sales
5 program.

6 Q Let's take a look at the next slide and we'll
7 come back to this one in a moment.

8 What's on this slide?

9 A This is an excerpt from Newegg's S1 or
10 prospectus. And it says, and this is speaking for
11 Newegg: We are a leading E-commerce company focused on
12 selling information technology, or IT products,
13 predominantly through our U.S. website, www.newegg.com.

14 As an example of our E-commerce leadership, we
15 are the second largest online retailer in the United
16 States as measured by our 2008 net sales of 2.1 billion
17 according to the 2009 Internet Retailers Top 500 Guide.

18 So they recognized in their public filings,
19 and mentioned in their filings with the SEC, that they
20 were the second largest retailer as well, so people
21 would be familiar with them.

22 Q Let's look at your next slide. I believe this
23 comes from the 2009 Internet Retailers Top 500 Guide.
24 What are you showing us on this slide?

25 A Well, this shows -- this is taken from that

1 guide. This is the document they were referencing in
2 their prospectus, and it mentions that 2008 web sales
3 volumes. Number 1 is Amazon; we're all familiar with
4 them. And then number 2 is Newegg. Then you'll see
5 several other companies that you might be familiar with;
6 Netflix, Zappos, Amway, several other companies.

7 If you look on the right side, there's FTD,
8 Disney. At number 17, Ms. Wolanyk mentioned Shutterfly
9 as an example.

10 Q Well, some of these names we have heard of so
11 far in this lawsuit. Can you tell us which of these 20,
12 top 20 web-only sites are licensed to practice the
13 patents in this lawsuit?

14 A Well, at this time the companies that have a
15 license, to my understanding, is number 1 is Amazon; you
16 can highlight that one. Number 4, Zappos has a license.
17 Number 12, FTD has a license. And then Number 17,
18 Shutterfly has a license.

19 Q I think we were looking at your demonstrative
20 called Financial/Business Factors. I think we're up to
21 the third bullet point there.

22 MR. SATINE: So let's go back to that
23 slide.

24 A Okay.

25 Q (By Mr. Satine) And will you please explain

1 the third bullet point.

2 A So the third bullet point here is another part
3 of the financial and business factors. That's an
4 important factor. It's recognizing the contributions
5 that were made by Newegg.

6 Newegg has a whole lot of money they spend on
7 inventory for the products they buy. They have
8 logistics in terms of getting it from warehouses to the
9 people. They have customer service they provide. And
10 so that's another consideration under the financial and
11 business factors that I certainly recognize.

12 Q Can you turn to Exhibit P-166 in your book?

13 A What's the exhibit number? I'm sorry.

14 Q 166.

15 A Okay. I have that.

16 Q Is it your understanding this is Newegg's
17 business review from the third quarter 2005 board
18 meeting?

19 A Yes, that's my understanding.

20 Q Let's look at Page 3 of P166 where you see the
21 picture of this cake. And can you tell us what your
22 understanding is of what this cake is intended to
23 represent?

24 A Yes. This document -- we'll only talk about
25 this page, but this document talks their assessment of

1 the marketplace.

2 This is before a board meeting, and this page
3 that we're looking at talks about the Newegg business
4 model. In other words, what's their recipe for making
5 this model work that they have, this internet site?

6 And what they've done is, in the form of a
7 cake, they've shown the important part, the important
8 layer is the customer experience. And several layers
9 are important.

10 You'll see they talk about three other layers,
11 but they highlight the customer experience layer, and
12 it's got several different pillars to it: The product
13 management, logistics, and IT and MIS. IT and MIS
14 stands for information technology and management
15 information type systems.

16 THE WITNESS: And if you maybe just pull
17 back a little bit on what you've blown up. Maybe blow
18 up the whole top portion of the cake would be a good
19 idea. There you go.

20 A So the customer experience is highlighted
21 there, and if you think about it, their front doors are
22 basically their website. They bring people into their
23 web, and that represents their front doors. They're not
24 Best Buy. They don't have a bricks-and-mortar
25 operation. Their front door is their website.

1 So they talk about -- their web experience is
2 part of that, and they talk about several other things.
3 Customer service. I think they provide customer service
4 as well and all the other functions.

5 But the point is, is that interface with the
6 customer and having a good customer experience is an
7 important part of it, and I recognize there's various
8 things that make up that customer experience that we've
9 talked about.

10 MR. SATINE: Let's put up the next
11 demonstrative entitled Newegg's Extent of Use.

12 Q (By Mr. Satine) What are we looking at here?

13 A So we looked at a chart similar to this
14 before, which had their total transactions, so this
15 shows their total transactions over this period of time,
16 the completed online transactions.

17 Of note is, if you look at 2001, it's well
18 less than a million transactions there. I believe it's
19 less than a half a million transactions in that year.
20 And it grew steadily, steadily, steadily all the way to
21 the point where, in 2009, the last year we have a full
22 year information for, it's nearly 12 million
23 transactions just in that year.

24 Q And does this relate to the last bullet point?

25 We're going to go back to it now, your slide Financial

1 Business Factors. Does this relate to the last bullet
2 point of that slide?

3 A Yes. One of the ways of looking at the
4 commercial success is taking a look at what's been done
5 with the technology and what's the extent of use.

6 Q In that last bullet point, it also talks about
7 profitability. Did you consider profitability?

8 A Right. So now we're getting into the
9 financial information. And so we've looked at their
10 transactions, but I also looked at their profitability
11 as well.

12 And there will be several charts we have on
13 this, but I looked at their profitability from the
14 transactions that they -- that they went ahead and had
15 on the internet.

16 Q When you look at profitability, what
17 profitability do you look at, from what time period?

18 A Well, in the hypothetical negotiation,
19 ideally, you look at the projected profitability, and
20 what's a reasonable expectation of what that
21 profitability would be as they were entering this
22 venture they were going into.

23 I also looked at actual profitability as well.
24 So I looked at forecasted or projected and also looked
25 at their actual results as well.

1 Q Did you look at any projections from the time
2 of the hypothetical negotiation in 2001?

3 A I would have liked to look at projections at
4 that time. Unfortunately, they didn't -- they said they
5 didn't have any at that point in time. So I looked at
6 projections that they submitted and looking as close to
7 the hypothetical as I could.

8 Q Okay.

9 MR. SATINE: Let's put Exhibit P171 up on
10 the screen.

11 Q (By Mr. Satine) Mr. Nawrocki, if you look on
12 the screen or in your book, what are we seeing on
13 Exhibit P171?

14 A Okay. So if you look at this, this is a
15 Newegg projected income statement, and it mentions that
16 it's with \$30 million capital raised being considered.
17 So they were seeking to get some capital financing.
18 And the top portion of the page talks about the dollar
19 amounts they were projecting.

20 THE WITNESS: Maybe you could blow up
21 that whole portion of the top page, top portion of the
22 page. There you go.

23 A And so that shows their projected operations
24 from '05 through '08.

25 Now, keep in mind, the hypothetical is in '01,

1 but this is as far back a projection as we obtained
2 through the discovery process.

3 And what it shows is their estimated sales in
4 '05 through '08. And those amounts are show in
5 thousands of dollars. So that first month of 2005,
6 that's \$1.6 billion, and then the next year, 2.3
7 billion, all the way up to \$4 billion in 2008.

8 So a fairly aggressive projection, but they
9 were candidly doing very well on their website. And so
10 their results, you'll see, are in the billions of
11 dollars.

12 The next line talks about their cost of sales.
13 That's when you take a look at the cost of the product.
14 If you have a monitor you're going to buy from them on
15 the website, it would be the cost of the monitor that
16 you would subtract to get the gross margin.

17 And then there's also -- SG&A is their selling
18 and general administrative costs. And then income from
19 operations are shown there, \$28 million all the way up
20 to 282 million in 2008.

21 Q (By Mr. Satine) Does Newegg project a percent
22 of profitability?

23 A Yeah. If you look at the bottom portion --

24 THE WITNESS: Maybe if you close that and
25 look at the bottom portion.

1 A So what they do on the bottom portion is, they
2 do this on a percentage basis. So this is something I
3 considered as well, is what were their percentage profit
4 expectations.

5 And what you'll see is that the gross margin
6 level --

7 THE WITNESS: Maybe you can just
8 highlight that gross margin row all the way across, and
9 then the same thing with income from operation two lines
10 down.

11 A So that represents what their profit
12 expectations were.

13 So gross margin, it goes from 9.4 percent all
14 the way up to 14 percent. And what that is, is giving
15 an example. So if you're selling a computer for \$200,
16 you're making 10 percent profit as an example on it, so
17 you're making \$20 of gross profit. That means you spent
18 \$180 on the monitor, and you're selling it for 200. So
19 that's generally how that works.

20 The income from operations is after they track
21 all of their accounting, financial, and corporate
22 expenses. And they show profits there from 1.8,
23 approximately, percent to more than 6 percent, 6.6
24 rounded, in 2008.

25 Q (By Mr. Satine) Okay. So you've told us that

1 you considered Newegg's projections of profitability.
2 Did you also consider Newegg's actual profitability in
3 doing your Georgia-Pacific analysis?

4 A Yes. I could have stopped here with the
5 projected, but I also said, well, let's take a look at
6 their actual profitability as well just to see what
7 things were like from their actual results.

8 So we've got another chart that explains that
9 as well.

10 Q Okay. What are we looking at on this chart?

11 A So this is a summary of Newegg's financial
12 results. This is overall through the company.

13 And on the left, you'll see the years from
14 2001 to 2009, and you'll see that in 2001, the first
15 year they started, they hit the ground running with \$115
16 million in sales and continued on all way through 2009
17 where they had 2 point -- more than \$2.2 billion in
18 sales in 2009.

19 The next column shows their gross profit for
20 each one of those years, and it goes from 11 million up
21 to \$240 million in gross profit in 2009.

22 And then the last column to the right is their
23 operating profit. An interesting thing is, right in the
24 first year, 2001, they were profitable right off the --
25 right off the bat. They made 1.6 percent in that year.

1 2002, they made 2.9 percent. So they started increasing
2 their profitability.

3 They had some low years. And then overall
4 you'll see that their overall percentage --

5 THE WITNESS: If you'll highlight the
6 bottom right-hand corner.

7 A -- that overall bottom is 1.6 percent on an
8 overall basis. And that's what they actually have done.

9 Q (By Mr. Satine) Now, a lot of numbers on this
10 slide. After you've identified all of this, what did
11 you do with it? How did you use it?

12 A A couple of things. We took a look at the
13 projected profits you heard about, and we were looking
14 at operating profits there. We also saw gross profit
15 information here.

16 I looked at that '01 and '02 period and saw
17 that they were doing 1.6 and 2.9 percent. So those
18 entered into my considerations, in terms of now -- in
19 terms of what type of royalty rate would I look at here.
20 There's profits they're making, and so one of the things
21 I had to consider was how to use this information in
22 terms of determining a royalty rate.

23 Q And how did you use this information in
24 determining a royalty rate?

25 A Well, the next thing I did is, I took a

1 portion of profits. There's a -- there's a rule in
2 terms of calculating or assessing a royalty, taking a
3 little portion of the profit, that's sometimes called a
4 25- to 33-percent rule. And that says I'm going to pay
5 25 to 33 percent or one-quarter to one-third of my
6 profits in a royalty.

7 So if you have a patent and I want to license
8 that patent from you, what we'd start our negotiations
9 at is, if I'm making 10 percent, I'd say, well, let's
10 start it at 2-1/2 to 3.3 percent, and you tune it up or
11 down from there.

12 But it's at least a starting point in the
13 negotiations. And it's been used in various different
14 damage contexts, as well as valuations and licensing as
15 well.

16 Q Is this a Jim Nawrocki rule, or do other
17 people use it?

18 A No. It's been a rule. It's been around since
19 I was a little -- since I was a little kid back in the
20 '60s. But it's called the 25-percent rule. Different
21 people have used it. It's been in textbooks.

22 There's mixed reactions about whether or not
23 you should use it exclusively or you should tune it up
24 or down. And what you'll see, based on my analysis, is
25 you need to apply it to the specific facts of the case.

1 Q Okay. Let's look at your next slide. What
2 does this slide entitled Profit Apportionment show?

3 A So this is how it works here, is what I've
4 done is I've taken Newegg's average order value. It
5 ranged -- it was sometimes over \$300. Sometimes it was
6 a little bit less than \$200. But their overall average
7 was \$200 per order.

8 I applied here an operating profit of 6
9 percent. You saw the forecast was 6.5, 6.6 percent. So
10 I've used 6 percent here to come up with an average
11 profit per order of \$12. So if they were expecting to
12 make 6 percent profit, the expectation would be about
13 12 -- \$12 per order.

14 And then the next section that I did was, I
15 apportioned it 25 to 33 percent.

16 THE WITNESS: So maybe you could
17 highlight that portion for me, if you would. Yeah, that
18 section right there.

19 A So that's the quarter -- one-quarter to
20 one-third apportionment I talked about.

21 So what you do is, you apply that to the \$12,
22 and you get \$3 to \$4, would be what the royalty rate
23 would be. That's in the blue block -- blue boxes.

24 So that would be the starting point. The rate
25 I came up with were 80 cents and 40 cents, and we'll

1 tell you how I got there, but this is at least a
2 starting point.

3 Q (By Mr. Satine) Okay. Let's go to the top of
4 the slide.

5 A Sure.

6 Q It says: Newegg's average order. Can you
7 tell us what that means? Most people spend \$200? Is
8 that how to you determine the average? How does that
9 work?

10 A Well, it's -- it's an overall average taken
11 from Newegg's documents. They produced very detailed
12 spreadsheets in terms of what their internet order sales
13 were, dollars and units, and the overall average is,
14 again, a little bit more than \$200.

15 At points in time -- I think near the
16 hypothetical, it was over \$300. But \$200, I thought,
17 was a conservative estimate of the average order size.
18 Now, some people might spend less than that. If you buy
19 a cable, it might be \$30 or \$40. If you buy a monitor,
20 it might run you \$200 or \$300. So this is the average
21 order size.

22 Let me give you an example. My son went to
23 Newegg two weeks ago. He was building a computer at
24 school, and he wanted to buy all these products. So he
25 made a transaction and spent over \$1200 on all the

1 different equipment, including the box and the fans and
2 the CPU.

3 So some orders would be larger; some would be
4 smaller.

5 Q Did your son spend the \$1200 or did you spend
6 the \$1200?

7 A He spent my \$1200, unfortunately, but it was
8 his graduation present.

9 Q Okay. And then we have your -- your operating
10 profit on this slide is 6 percent, but you told us that
11 related to projected, right?

12 A Well, we talked a couple of slides ago about
13 their projection. It was really 6.5 percent. So I
14 said, well, what -- we don't have what their expectation
15 was at the time. So -- and this is when I used -- I
16 used 6 percent on this slide. I've done it a couple of
17 other ways as well.

18 So this was trying to use what would be their
19 reasonable expectation on a go-forward basis of what
20 their profitability was.

21 Q Okay. Let's go to your next demonstrative.

22 A Sure.

23 Q I think that's the last of your
24 demonstratives.

25 A Yes, I think it is.

1 Q Okay. What does this demonstrative show us?

2 A Well, this is the same type of analysis, only
3 instead of just using the 6 percent, which I used on the
4 prior chart -- that's on the right side -- I'm now using
5 a profitability of 1-1/2 percent on the left side there.

6 THE WITNESS: If you'll highlight that.

7 A And then the next one would be 3 percent and
8 then 6.

9 You know, there's different profitability
10 there. You say, well, why all the different numbers?
11 Well, that relates to the fact that on those actuals, as
12 well as their forecast, they were trying to anticipate
13 what's their reasonable expectation, in terms of how
14 profitable they'll be, and this shows different
15 scenarios, basically.

16 Q (By Mr. Satine) So the first scenario is what?
17 Walk us through that a little more slowly.

18 A Sure. So at the first column, it's 1-1/2
19 percent. You apply that to the \$200 of average order
20 size, and you get \$3 average profitability.

21 And under that, if you split it between
22 one-quarter and one-third, you would wind up with rates
23 of 75 cents to a dollar. So that would be a scenario in
24 that fashion.

25 The middle column does it at 3 percent. If 3

1 percent was their expectation, then the resulting
2 royalty rates would be 1-1/2 to \$2.

3 And if 6 percent was their expectation, you
4 would say, well, they're expecting probably closer to
5 their forecast, then it would be 3 to \$4.

6 So that's -- that's how this chart marks, and
7 it's an apportionment. Oftentimes, if I have a forecast
8 or some actual information that we knew was their
9 expectation, we would use that; but here we had several
10 different data points, so I -- I've included all of
11 them.

12 Q Okay. Now, I said that was your last
13 demonstrative, but I want to go back to one just to be
14 sure we've covered everything.

15 A Sure.

16 Q The slide where we had your summary of the 15
17 Georgia-Pacific Factors --

18 MR. SATINE: If we can get that back up
19 for a moment.

20 Q (By Mr. Satine) Okay. We've talked about the
21 licensing factors. We've talked about financial
22 business factors. We've talked about technical factors.
23 We've talked about the hypothetical negotiation.

24 The only one we haven't talked about yet is
25 Factor 14, the opinion testimony of qualified experts.

1 How did Factor 14 affect your analysis?

2 A Well, that's where I basically bring all of
3 the analysis together and kind of determine what the
4 final royalty rate is. It's my opinion that I think
5 this is a reasonable royalty rate. It's based upon my
6 judgment of my consideration of the various
7 Georgia-Pacific Factors that we've already been
8 discussing.

9 Q Okay. Tell us how you did that.

10 A There's a whole set of data points that we've
11 been talking about, and it's probably easier if I my use
12 the easel to explain the scenarios here.

13 MR. SATINE: Your Honor, may the witness
14 get up and go to the easel?

15 THE COURT: He may.

16 MR. SATINE: Thank you.

17 THE WITNESS: Can I get some water?

18 MR. SATINE: We have water coming from
19 all directions.

20 THE WITNESS: I usually speak pretty
21 loud, but let's see if I can do it.

22 MR. SATINE: Water and a microphone.

23 THE WITNESS: Water and a microphone.

24 Can I try it without the microphone, if
25 that works? I'll try to talk loud. Is it okay if I try

1 at other apportionments as well, that would bring it
2 into recognition of the different Georgia-Pacific
3 Factors that I considered.

4 So then I had to determine, based upon
5 judgment, what rate did I feel was appropriate. And so
6 what we have is for the '314 and the '492, I felt that
7 80 cents would be very reasonable. In light of this, it
8 would be conservative, but yet reasonable in light of
9 some of these data points.

10 And for the '639, 40 cents, which is the
11 session management one.

12 '314 and '492 relates to the whole system; the
13 '639, at least for Newegg's application, relates to
14 session management, and so I've used the smaller royalty
15 rate there. So this represents the royalty rates.
16 It's judgment based upon these different data points
17 that I considered. It's not a calculation from these.
18 They're a judgment that I felt, based upon these
19 different data points, it fell well within that range.

20 Q Okay. So your -- so the range was -- you have
21 80 cents, and that's for what patents?

22 A It's for the '314 and the '492 patents.

23 Q And then you have 40 cents, and that's for
24 what?

25 A That's for the '639 patent.

1 A That's correct. Over the last 30 years, yes.

2 Q And naturally, you do charge for your time,
3 don't you?

4 A Yes, I do.

5 Q Looks like you've done a lot of work here. Do
6 you know how much time you spent?

7 A More than 200 hours, I'd say.

8 Q And how much do you charge per hour, sir?

9 A 525 an hour is the rate my firm charges.

10 Q Your firm is your firm, isn't it?

11 A No. I have five other partners.

12 Q You're the majority owner, aren't you?

13 A No, I'm not. I have well less than 50 percent
14 of the ownership.

15 Q You've appeared in cases, either in deposition
16 or trial, in Delaware, right?

17 A Yes.

18 Q Indiana?

19 A Yes.

20 Q Illinois?

21 A Yes.

22 Q New York?

23 A Yes.

24 Q Massachusetts?

25 A Yes, Boston.

1 Q Norway?

2 A Norway as well, yes.

3 Q And then you mentioned a half a dozen cities
4 or so in Texas where you've appeared in courtrooms to
5 give testimony.

6 A That's correct.

7 Q Now, let me ask you some questions and see if
8 we can agree on certain things before we get to any
9 areas of disagreement, all right?

10 A Okay.

11 Q Before taking the witness stand, I'm sure that
12 you studied your reports.

13 A Yes. I believe I have them right here. Yes.

14 Q All right. And you suspected that I might ask
15 you some questions about your reports, and you prepared
16 yourself for that, didn't you?

17 A Well, I wasn't sure what questions you would
18 ask, but if you did, at least I'd have my reports with
19 me.

20 Q All right. And your deposition was taken?

21 A Yes, it was.

22 Q And you studied that, too, I'm sure.

23 A I reread it in the last few days, yes.

24 Q All right. Transact. You're aware that
25 Transact represented the off-the-shelf publicized (sic)

1 A Yes. I'm familiar with the terms of licenses
2 certainly, and so I read them, and I'm generally
3 familiar with different contexts.

4 Q All right. If we look at this document in
5 Paragraph 1(b), which is the field of use that -- you
6 were asked a few questions about it, and I want to take
7 you through a little bit more of that.

8 It says means the -- field of use means the
9 development and operation of intranet and internet
10 websites by licensee, solely for licensee's internal
11 business purposes, which may include dissemination of
12 information related to licensee's products and services
13 and the sale, use, manufacture, or distribution of
14 licensee's products and services and for no other
15 purpose.

16 Do you see that?

17 A Yes, uh-huh.

18 Q Now, you've given us your interpretation of
19 that agreement, but you're basing that on just your
20 reading of the document; isn't that so?

21 A It's my understanding of the context of that
22 clause, but certainly attorneys might have different
23 perspectives on it. I just know that referred to
24 internal business purposes.

25 Q All right. I want to refer you to Plaintiff's

1 Exhibit 194, which is the Katco license agreement.

2 A Okay.

3 Q Do you remember being asked a few questions
4 about that?

5 A Yes, I do.

6 Q And there it says: The licensee operates
7 cosmeticmall.com website. That's in the second whereas
8 clause at the top.

9 A Yes, I see that.

10 Q And the license -- the patents that are
11 licensed here include what's listed in 1(a), which
12 includes the '780, the '314, and the '492; is that
13 right?

14 A That's correct.

15 Q The two patents-in-suit, plus the parent of
16 the third patent; is that right?

17 A That's correct.

18 Q And in Paragraph No. 2 here, it says that the
19 license during the term of this agreement and subject to
20 the payment specified in Paragraph 7 below, Divine
21 grants to licensee a paid-up, non-transferable,
22 non-exclusive license.

23 Do you see that?

24 A Yes, I do.

25 Q All right. And as someone familiar with

1 reading license agreements, you know what paid up means,
2 don't you?

3 A Yes.

4 Q That means a one-time fee, and you're done,
5 doesn't it?

6 A Yes.

7 Q And you were asked some questions about this
8 Paragraph 7 being for \$1,000 and a representation that
9 that represented 10 percent of the gross profit of sales
10 of product over the internet in Paragraph 7.

11 Do you remember being asked about that?

12 A Yes, I do.

13 Q Now, you know that the term of this license
14 was granted until these patents expired. Did you know
15 that?

16 A That's usually the case, but let me take a
17 look.

18 Q Paragraph 22.

19 A Yes, I see that.

20 Q All right. And so if we look at this
21 document, \$1,000 was paid by this company, one-time,
22 paid up for the full life of the patents, even if their
23 business skyrocketed in the future; isn't that so?

24 A That would seem to cover that as well.

25 Q One of the benefits of a lump-sum payment at

1 the bargaining table is, the party receiving the money
2 doesn't have to -- they have a guarantee; they get the
3 amount they agree upon, regardless of the success of the
4 other party; isn't that right?

5 A It could have been a benefit to the licensor,
6 but it might not always be a benefit to the licensor.

7 Q All right. Let's look at Plaintiff's Exhibit
8 199. And this is the license agreement that you were
9 asked about with -- I'm going to call it Odino,
10 O-D-I-N-O.

11 A I think it's Odimo, I think.

12 Q Okay. Do you recall being asked about this
13 license?

14 A If you don't mind, Mr. Sayles -- I'm sorry.
15 The exhibit number?

16 Q It's Plaintiff's Exhibit No. 199.

17 A Okay. I have that.

18 Q And I do want to be sure you're with me, so --

19 A Yeah, I'm with you.

20 Q -- if you will, look in -- the licensed
21 patents, it does include the '314, the '780, the '424,
22 and the '492 by number in Paragraph 1(a), doesn't it?

23 A That's correct.

24 Q That would to be the patents-in-suit in this
25 case; is that right?

1 A That's correct.

2 Q And if you go down to Paragraph No. 2, it says
3 that Divine grants to licensee a paid-up,
4 non-transferrable, non-exclusive license. Do you see
5 where it says that?

6 A Yes.

7 Q And paid up here means the same thing it meant
8 just a minute ago, paid up one time for good; isn't that
9 right?

10 A Generally paid up in one time. Sometime it
11 could be multiple payments, but paid up.

12 Q All right. And if we look at Paragraph No. 7,
13 that's where the \$30,000 is; is that right?

14 A That's correct.

15 Q So if the business of this company skyrocketed
16 after they paid for their paid-up royalty, they wouldn't
17 owe any more money, would they?

18 A I'm not aware of them needing -- owing any
19 more money, if their business took off from here.

20 Q They would have paid their 30,000, and that's
21 it; is that right?

22 A That's my understanding.

23 Q And if we look at Paragraph 22 of this same
24 document, just to be sure, the term of this agreement is
25 until the licensed Divine patents expire.

1 Do you see that?

2 A Yes, I do.

3 Q I'd like you to take a look at Plaintiff's
4 Exhibit 202 that you were asked about. This is the
5 license agreement with Webster Orchard. Tell me when
6 you're there.

7 A All right. I'm there.

8 Q All right. And this is a license agreement
9 between Divine on the one hand and Webster Orchard on
10 the other hand in September of 2002; is that right?

11 A Yes.

12 Q Paragraph 2. Once again, this is a paid-up,
13 non-transferable license, isn't it, according to its
14 terms?

15 A That's correct.

16 Q And if we turn the page to Paragraph No. 7,
17 even though there's a recitation that this is equal to 2
18 percent of the licensee's gross sales, the payment is 2
19 percent of \$100,000 one time, paid up for the life of
20 the patents; isn't that right?

21 A That's my understanding.

22 Q In these transactions of Newegg that you had
23 up on the chart as your royalty base -- you remember the
24 number of transactions?

25 A Yes, uh-huh.

1 Q Did you do a subtraction for the transactions
2 where a single item only was purchased?

3 A No. This includes all completed transactions.

4 Q All right. And if we look in your report or
5 your deposition and in your testimony now, you are not
6 taking into account the possibility that single-item
7 transactions are non-infringing, are you?

8 A I don't have an opinion on the infringement.

9 Q But you haven't -- but you haven't backed out
10 the single-item transactions in all these numbers you've
11 given us.

12 A I've included all completed transactions.

13 Q Now, I think that we can agree on this. To be
14 clear with the jury, it is not your job and is not your
15 background and expertise to give opinions on the
16 validity of these patents; is that right?

17 A That's correct.

18 Q Your job is to assume that they're valid; is
19 that right?

20 A That's correct, as we talked --

21 Q And it's the jury's job to decide that; is
22 that right?

23 A The validity?

24 Q Yes, sir.

25 A Yes. The validity will be decided by the jury

1 other apportionments.

2 Q All right.

3 A Is that what you're referring to?

4 Q Yes, it is.

5 A What I had it on the easel over here.

6 Q Yes.

7 A Yes.

8 Q Now, these apportionments --

9 MR. SAYLES: May I approach this easel,
10 Your Honor?

11 THE COURT: Yes, you may.

12 Q (By Mr. Sayles) These apportionments --

13 A Excuse me. I'm sorry. Could you just turn
14 the easel slightly?

15 Q I'm sorry.

16 A That's good. That's fine.

17 Q These apportionments are your opinion of what
18 is a proper adjustment or apportionment of this; is that
19 right?

20 A Those are my calculations of an apportionment
21 based upon recognition. So that's a judgment, as is the
22 80 cents and the 40 cents.

23 Q A recognition of one thing is Newegg's
24 contribution to its success by, among other things, good
25 customer service, right?

1 A Uh-huh.

2 Q But you haven't done an economic analysis
3 where you attribute specific numbers to the contribution
4 of customer service, have you?

5 A A dollar amount to the customer service?

6 Q Dollar amount.

7 A No. I have not put a dollar amount to the
8 customer service.

9 Q Or a specific percentage.

10 A Not specifically to customer service, but the
11 remaining amount would be for Newegg.

12 Q Right. And similarly, you haven't put a
13 number, based on economic analysis, on an adjustment for
14 persons who are attracted to Newegg because of the good
15 prices, have you?

16 A Not a specific number, but that's also
17 included in the 80 to 85 percent that I'm giving to
18 Newegg.

19 Q All right. But that's -- that's just your
20 judgment and opinion there --

21 A That's correct.

22 Q -- isn't that right?

23 A That's correct.

24 Q We don't have a specific economic analysis
25 analyzing each of the factors that Newegg contributes

1 here, do we?

2 A Not other than looking at their overall
3 financials and their overall profitability.

4 Q Otherwise, it's your opinion; is that right?

5 A Based upon the information that they provided.

6 Q Are you aware of specific survey information
7 about why customers are attracted to Newegg?

8 A I don't recall if there was survey information
9 that was available. I know there's various criteria,
10 including customer service, logistics, and things like
11 that, but I don't recall if there was customer service
12 information.

13 Q All right. As a damage expert witness, on
14 occasion, you've done surveys yourself, haven't you?

15 A In a few instances, I've done surveys.
16 Oftentimes, I've worked with other survey experts.

17 Q Here, did you do any sort of survey to
18 determine what low pricing has to do with Newegg's
19 success?

20 A No. I assumed that was a consideration.

21 Q Did you do any survey or analysis to determine
22 what its award-winning customer service contributed?

23 A No. I assumed that was a consideration as
24 well.

25 Q Or fast shipping?

1 A I considered that as well.

2 Q But you can't quantify it with a survey, can
3 you, what that contribution is?

4 A That's correct. There's no survey that I've
5 done to assess what amount was relating to fast
6 shipping, how many people went there for fast shipping.

7 Q And actually, there's no specific economic
8 analysis, other than your judgment about it, in your
9 report or your deposition; isn't that right?

10 A That's correct. I did not do a survey or an
11 economic analysis of the specific attributions to
12 customer service or fast shipping.

13 Q Or any other aspect of Newegg's contribution
14 to its own success; isn't that right?

15 A Other than the documents that I saw that
16 Newegg produced.

17 Q You did some calculations of what Newegg's
18 operating net profit was, didn't you?

19 A That's correct.

20 Q In actual fact, it comes out to about \$2.94
21 per transaction; is that right?

22 A I -- it depends on how you're calculating it.
23 You talking about the entire period?

24 Q Well --

25 A Which period are you referring to?

1 A I would say it was based upon my analysis of
2 the business information. I wouldn't say to some extent
3 one could regard that as an economic analysis. I would
4 regard it as more of a business analysis and business
5 judgment based upon the business plans and other
6 information that Newegg produced in terms of the
7 importance of this type of technology to them.

8 Q One of the things that I think that you have
9 clearly assumed here is that the technology that is
10 embodied in the patents is integral, critical, or
11 fundamental to Newegg's business; is that right?

12 A I think that's fair.

13 Q And if that turns out to be incorrect, then
14 your opinion on damages would similarly be incorrect?

15 A The judgment in terms of how critical the
16 nature would be, I relied upon the technical experts.
17 If it's not as critical, and that's a judgment for the
18 jury, then adjustments may or may not be necessary.
19 It's the damages calculation.

20 Q All right. You know that Soverain and Newegg
21 are not competitors in the marketplace, don't you?

22 A That's correct. I think there was some
23 discussion about Newegg Mall; but in general, I think
24 that's the case.

25 Q And so what Soverain is claiming here, and

1 what you're supporting, is not any lost profits or lost
2 sales by Soverain, but rather a royalty; is that right?

3 A That's correct. The calculation is a
4 reasonable royalty or compensatory damages for
5 reasonable royalty.

6 Q Because Soverain hasn't lost any sales or
7 profits on account of Newegg, have they?

8 A Has Soverain lost any sales?

9 Q Sales or profits on account of Newegg.

10 A I have not been asked to analyze that. But
11 Soverain is in the marketplace of selling software, but
12 I'm not aware of any specific lost sales. I'm not
13 saying they haven't.

14 Q And you do recognize that the products that
15 are sold by Newegg -- the televisions, the computers,
16 the cables, et cetera -- are not patented products;
17 rather it's the process or method that we're talking
18 about here?

19 A Products may or may not be patented, but
20 not here.

21 Q Not by these?

22 A Not by these patents.

23 Q All right. You've testified, as you've
24 acknowledged to me, quite a few times.

25 A Yes.

1 that the company is up to date on its corporate
2 governance practices.

3 Q When did you become the general counsel of
4 Newegg?

5 A At the end of September in 2005.

6 Q And as the corporate representative here in
7 court and as the general counsel of Newegg, are you
8 familiar with its history from formation?

9 A I'm very familiar with Newegg's history since
10 its formation. Part of my job is to keep the records of
11 Newegg.

12 When I first joined, I was basically the
13 second general counsel. The first general counsel was
14 there very briefly. And so I had the task of,
15 basically, tracking down, organizing, understanding all
16 of our corporate records, Newegg's corporate records,
17 since its formation.

18 Q Can you tell us when Newegg was founded or
19 when it launched?

20 A I think Newegg Computers was technically
21 founded in 2000 as a company. I think there's been talk
22 in the last couple of days of a company called Magnell
23 or ABS. Magnell and ABS are actually the same company.
24 And Newegg Computers, when it was formed, was a separate
25 company from Magnell and ABS. It was literally a

1 startup company.

2 And Magnell and ABS was indeed a
3 computer-maker. It was -- the industry calls it a
4 systems integrator. They build computers to order.
5 And as some people are probably familiar with, that was
6 a very, very competitive market in the mid to late '90s,
7 early 2000. With the advent of companies like Dell,
8 like HP, like Compaq, basically, Magnell was being
9 slowly squeezed out of business.

10 And Newegg was virtually a -- our founder,
11 Fred Chang, viewed Newegg as virtually a Hail Mary.
12 There was a young executive at the time named Howard
13 Tong, who said: You know, Hey, Fred, there's this thing
14 called the internet. Some of our customers say they'd
15 rather buy some computer components from us instead of
16 buying built-to-order systems. Can we try this out?
17 And Fred said: Yeah, try it out. If you don't make it,
18 I'm packing up and going home.

19 Q All right. So that's a little background on
20 the origin of Newegg as an online retailer of
21 electronics?

22 A That's correct.

23 Q All right. Now, the jury has heard some other
24 witnesses say -- and they've heard the opening
25 statements, but the opening statements aren't evidence.

1 I need to get you to tell the Ladies and Gentlemen of
2 the Jury whether Newegg has been successful from the
3 time of its inception to date.

4 A We are very proud to say and we're very lucky
5 to be able to say that we've been very successful as a
6 company. We have grown very quickly since the launch of
7 the website in early 2001.

8 In recent years, our growth has slowed
9 tremendously. Part of it is just the law of large
10 numbers. Part of it is because the competition has
11 gotten very, very fierce in internet and online retail.

12 Q All right. Now, keep your voice up just a
13 little bit. You're doing better now, but -- you had it
14 there for a moment.

15 When did Newegg first learn of Soverain?

16 A We first learned of Soverain in November of
17 2007 when we were served with a lawsuit.

18 Q And had you ever heard of Soverain yourself
19 before?

20 A I had never heard of Soverain before November
21 of 2007.

22 Q And did you have any familiarity or knowledge
23 of the patents-in-suit before the lawsuit was filed?

24 A I did not.

25 Q What about Soverain's predecessor Divine and

1 Q All right. Let's just be clear about this.

2 In the context of this lawsuit, you have
3 become familiar with Soverain and its business, right?

4 A Right. Correct.

5 Q Are Soverain and Newegg competitors in the
6 marketplace?

7 A We're not competitors in the marketplace.

8 Q Explain that, please.

9 A Soverain doesn't sell any products, certainly
10 not on a resale basis. They sell -- or they purport to
11 sell a software suite. They purport to license a family
12 or groups of patents. We don't do that.

13 We sell -- our business involves buying
14 someone else's product, merchandising it, and then
15 reselling it, providing services to customers if they
16 have problems. We're the middleman, trusted middleman,
17 between customers and all the vendors.

18 Q Mr. Cheng, you heard me, at least in opening
19 statement, describe the early beginnings of Newegg and
20 its lack of resources.

21 Can you describe what Newegg is like today in
22 terms of its approach to managing its resources?

23 A Well, despite what appears to be our business
24 success, one of the reasons that I think Newegg has
25 always been successful is because of our frugality.

1 We've always -- we worked frugal before it was popular
2 to be frugal.

3 I said, you know, one of the reasons that I
4 think Newegg has been successful is that, you know, we
5 have always been very, very frugal. We were frugal
6 before it was popular to be frugal, and we've always --
7 our company is what's known as a C-corporation.

8 And so we don't pay dividends. All the money
9 that the company earns always gets plowed back into the
10 business. And we watch every single penny very
11 carefully. And we do that so we can offer our
12 customers, you know, low prices and high-quality
13 customer service.

14 So at the corporate level, we really try to
15 squeeze every single penny. Every single penny has to
16 be justified. Our -- you know, I think you'll see a
17 picture later of our corporate headquarters. It's a
18 warehouse. We converted a warehouse.

19 I work in a cubicle. Our CEO works in a
20 cubicle. All of our executives fly coach everywhere we
21 go.

22 Two nights ago, our CTO, James Wu, who you'll
23 meet later today, and I were up till 1:30 in the morning
24 putting together exhibit binders physically, and that
25 saved us a lot of money, so...

1 A It's a picture of the same group.

2 Q All right. Now, there's been some discussion
3 of Newegg's warehouses where they actually do shipping.

4 Tell the Ladies and Gentlemen of the Jury
5 where the shipping warehouses are located.

6 A We have two shipping warehouses located in
7 California. So our company was founded in California,
8 so it's -- we have one warehouse in California for
9 larger bulker -- bulkier items, and then we have another
10 warehouse, which is Warehouse 7, for the smaller items.

11 We have two warehouses -- well, one warehouse
12 each in Memphis, Tennessee, and one in New Jersey, and
13 we put them there for a specific reason.

14 It allows us to offer our customers a
15 guarantee, three-day -- three-business-day delivery from
16 the time your order is approved to your doorstep. And
17 it allows us to use ground shipping rates to get it
18 there that quickly.

19 We usually get products to our customers in
20 about two days. That's one of the reasons customers
21 like us. We -- we over-deliver.

22 Q Do you usually do it in two, but you guarantee
23 three?

24 A We typically guarantee three. There is a
25 discount -- there's also now a discounted shipping

1 option where if you rely on the United States Postal
2 Service, it's a five-day guarantee.

3 Q All right. Now, I'd like to go through one of
4 the warehouses. Is the operation of the three
5 warehouses substantially similar so that if we look at
6 one, we'll have the idea?

7 A Yes. Yes. They're very, very similar.

8 Q All right. Let's take a look at Defendant's
9 Exhibit 112, No. 46. Just tell us what we're looking at
10 here, please.

11 A This is the initial receiving area in
12 Warehouse 7. And this is where, when we order a product
13 from a vendor, the vendor will ship it over to us, we
14 accept the shipment, and you can see on the left-hand
15 side, you know, basically, shrink-wrapped, you know,
16 items from a particular vendor.

17 And you can see in the background the racks
18 that we have -- we built to store this inventory. It
19 looks a little bit like a Cosco, but slightly messier.

20 Q All right. Now, I want to move through the
21 process in the warehouse.

22 Let's take a look at No. 7. Tell the Ladies
23 and Gentlemen of the Jury what's going on in Photograph
24 112-7.

25 A So the gentleman on this forklift that you see

1 themselves. Like almost everybody else, we rely on and
2 use UPS and FedEx and the U.S. Postal Service. But we
3 now ship so many boxes a day now, that we have a very
4 close partnership with UPS.

5 And here what we have done is, you know, we've
6 basically assembled all of the boxes going probably to
7 one area, maybe based upon ZIP codes, and we're
8 shrink-wrapping it so that UPS can come and just grab
9 it, stick it in the right truck, so that they can just
10 speed it off there and get it to our customers in our
11 promised three days.

12 Q All right. And then 65, is this the back end
13 of an open truck?

14 A That's correct. At any given time, because we
15 ship a lot of products, we have UPS trucks parked
16 literally right -- right at our warehouse gate. We have
17 at any given time probably about a dozen UPS personnel
18 stationed inside our warehouses.

19 Q All right. Now, I want to shift your
20 attention from the warehouse now that we've seen how
21 it -- products come in, get stored, and get shipped out.

22 Generally speaking, tell the jury what the
23 company's 16 principles are in a general way.

24 A Our company was founded and it's still largely
25 controlled by a gentleman named Fred Chang. And he's

1 really probably the primary reason, I think, Newegg was
2 able to achieve success.

3 Like a lot of business visionaries, he didn't
4 set out -- and he's told me this many times -- he didn't
5 set out to start a company, to run a company to make as
6 much money as possible out of every customer, out of
7 every transaction. He's always believed that Newegg
8 should represent more than making money.

9 And he's told me many times: If you do the
10 right thing by your customers, if you're fair, the
11 financial part, the money will take care of itself.

12 And so he -- from the very beginning, he wrote
13 up a business philosophy. He wrote up 16 principles.
14 And he wanted all of our workers to follow these 16
15 principles, all of our managers, all of our workers.

16 And these are essentially guidelines on how
17 managers should treat people and employees, how our
18 employees should be viewing customers, and how we should
19 conduct ourselves and behave.

20 Q Do these banners that we see in 112-14
21 actually hang in the workplace at Newegg?

22 A They are in every one of our offices. At our
23 bigger locations, they're in multiple places. They're
24 printed on the back of all of our employee IDs.

25 Q All right. Now, this particular actual

1 photograph of the 16 principles is a little hard to read
2 here, and we've prepared a slide that simply puts those
3 principles on the slide.

4 Can you tell us -- and you need to do it
5 verbally, because we're making a record here -- what the
6 16 principles are that constitute the company
7 philosophy?

8 A Respect, tolerance, fairness, integrity,
9 honesty, objectivity, cooperation, and proactivity,
10 leading by example, strictly enforcing philosophy,
11 knowing when to delegate, trustworthiness, maintaining
12 the highest standards, intelligence, passion, knowledge,
13 and experience.

14 Q All right. You told us who created these
15 principles and why. And are these principles lived and
16 talked about on a daily basis in the workplace?

17 A They are very, very important to Fred.

18 Q All right.

19 A Now, of these principles, he -- I've worked
20 fairly closely with Fred, and of the principles, he --
21 what ties them all together, what he believes very
22 strongly in, is our integrity and our fairness.

23 You see integrity and honesty both up there,
24 and some people actually would say they're kind of
25 redundant, because honesty is really just a subset,

1 technically, of integrity, and that's the --

2 Q Now you're being a lawyer.

3 A That's the lawyer in me thinking, that's
4 right. And I pointed that out to Fred, and Fred said:
5 Well, it's important enough to me I want to say it
6 twice.

7 Q All right. Now, let me shift your attention
8 to customer service.

9 What is Newegg's reputation regarding customer
10 service?

11 A Newegg's business from day one, it was built
12 on a recognition that our success in business ends and
13 begins -- begins and ends with whether or not we're able
14 to make our customers happy, to know what they want, to
15 give them what they want, to give them selection of
16 product and low pricing.

17 And if something goes wrong, we're, you know,
18 to be fanatical, completely fanatical about making sure
19 that our customers are well taken care of.

20 I mean, we -- for many years, we had a return
21 policy, for instance, where a year after you bought an
22 item, you could call up our customer service call center
23 and say: Hey, I have a problem. You know, yes, I know
24 your return policy is technically 30 days.

25 And our CS guys would be delegated the

1 authority to say: You know what? We'll take care of
2 you. You know, you're our customer, and we want you to
3 be happy.

4 And that's been Newegg's philosophy since day
5 one.

6 Q I'm showing in a slide graphic here some
7 representative awards for customer service. Are these
8 all the awards that Newegg has received?

9 A No. These are not all the awards we've
10 received for customer service. I suspect there are
11 probably some other ones. These are some of the ones
12 we're very proud of. A lot of these -- these are
13 awarded by third parties.

14 Computer Shopper, for instance, is a leading
15 magazine for a core customer base of people who like to
16 play computer games and build their own computers.

17 We're proud to say that we won their Shoppers
18 Choice awards for now the last five years. We also won
19 in 2009.

20 You know, we were ranked the top computer and
21 electronics retailer, not in size, but because of our
22 customer service, in 2008, in a national survey of
23 internet retailers.

24 We were voted the -- well, I think -- do you
25 want me to read it? Sorry. Do you want me to read all

1 of them or --

2 Q No. Are these just representative of the many
3 customer service awards that Newegg has received?

4 A Yes. They're representative of awards and
5 recognition that we take a lot of pride in.

6 We don't do a lot of mass market advertising.
7 This is really -- it's doubtful that many people have
8 heard of Newegg, I think, before -- many of you had
9 heard of Newegg before this lawsuit.

10 And what we do instead is we let our customers
11 do the advertising for us. It's word of mouth that
12 makes our business. About 70 percent of our revenue is
13 generated from people coming back because they had a
14 good shopping experience.

15 Q Based on your knowledge, experience, and your
16 time with Newegg, what distinguishes Newegg from its
17 competition in the online sale of retail products?

18 A It's our customer service. I think it's the
19 fact that we try to delight our customers. We try to
20 over-deliver to our customers. When we promise three
21 days, we try to get it to them in two. We take care of
22 them.

23 Our customer services -- we make sacrifices to
24 take care of our customers. Our customer service call
25 center has always been in the United States.

1 We've never considered sending our call center
2 offshore or to outsource it, because we want it to
3 control the customer experience. We want it to be able
4 to be there -- executives to be there in person to say:

5 Hey, you know, take care of that customer on
6 that first call and that first contact.

7 And of course, as Dr. Grimes mentioned on
8 Monday, our low prices.

9 THE WITNESS: And by the way, thank you,
10 Dr. Grimes, for your business.

11 Q With regard to the awards that have been
12 received and the success that's been achieved, has any
13 particular specific function of the website ever been
14 pointed out as the basis for that?

15 A The awards that we've received for customer
16 service, nobody has told us that any functionality --
17 and you can think of these functionalities really, I
18 think, appropriately as tools, right?

19 They're sort of -- they're just like if you
20 were in a supermarket. There's a shopping cart. It's a
21 tool. It's one asset out of hundreds, if not thousands,
22 of different assets, tools, fixtures, that contribute to
23 allowing a store to exist.

24 Nobody has mentioned a -- to my knowledge, in
25 these awards, a specific tool that caused them to vote

1 Newegg as providing great customer service.

2 Q All right. Now, in the three warehouses and
3 at the corporate headquarters that you've told us about
4 today, how many persons are employed with Newegg?

5 A I'm sorry. Just in the three warehouses and
6 the corporate headquarters?

7 Q Well, yes, in the United States.

8 A In the United States, we employ about a
9 thousand people.

10 Q And does that represent growth in the last few
11 years, in terms of the number of jobs and employees?

12 A No. Actually, we've managed to figure out
13 ways, you know, through innovation, to not increase our
14 headcount in the United States.

15 But given the fact that the economy was
16 contracting, we're extremely proud -- when my new CEO
17 came on board two years ago, he talked to all of our
18 employees. He made a commitment to all of our
19 employees, which we're very proud to have kept, that we
20 would not lay anybody off to meet our numbers.

21 Q All right. And you mentioned that the company
22 is a very frugal company. You've talked about that.

23 A Yes.

24 Q And the sales at low prices, you've talked
25 about that.

1 Q All right. How would you describe Newegg
2 today?

3 A Oh, Newegg is an online retailer. We sell all
4 the merchandising, is acting with the proper retailer.
5 So you can train and actually get the best buy on the
6 internet.

7 Q When you joined the company, did the Newegg
8 website exist?

9 A No, they don't.

10 Q You indicated that Newegg became an online
11 retailer. What type of stores does Newegg compete with
12 in the sale of products?

13 A Oh, most of the competitor company was Best
14 Buy, Circuit City, and HP, Dell, and Amazon.

15 Q All right. And does Newegg manufacture or
16 sale any E-commerce software?

17 A No, we don't.

18 Q Are you familiar with a company known as
19 Soverain?

20 A Never till the lawsuit was filed.

21 Q Does Newegg compete with Soverain in the
22 marketplace as you understand Newegg's business and
23 Soverain's business?

24 A No. We are the retailer.

25 Q And what does Newegg sell online?

1 A We sell the merchandising. We buy the
2 electronics from the distributor or manufacturer, and we
3 sell them through online. You never to leave the home
4 to shop. We have many offerings online.

5 Q And does Newegg manufacture these items?

6 A No. We just approved and we buy from the
7 manufacturer or distributor.

8 Q All right. Let me pull up Defense Exhibit 71,
9 and do you recognize this document?

10 A Oh, this is the home page of Newegg.

11 Actually, if one customer have the browser,
12 can open -- open it and type the address,
13 <http://www.newegg.com>. Then push enter, and the Newegg
14 home page will show up.

15 Q All right. Now, this is just an example that
16 was taken back just before -- well, before Christmas, I
17 guess, by the snowman that's --

18 A Yeah.

19 Q -- on the banner.

20 What are the categories that go across the top
21 ribbon here?

22 A Well, you know, we are the -- most of the top
23 revenue is called computer hardware. Most of these we
24 derive our revenue from.

25 Also, we sell the PC, the laptop, networking,

1 electronic, home theater, camera, camcorder, software,
2 gaming console.

3 So we have a lot of the category. The list is
4 very long. You can see these are just a list of partial
5 of the category we -- currently we offering.

6 Q Partial categories they're offering?

7 A Yes, that's right.

8 Q All right. Let's take a look at computer
9 hardware.

10 MR. SAYLES: If we can blow that up just
11 a little bit.

12 A Yeah. We -- because the computer hardware is
13 a category, we have -- there's a backup device, a
14 minicomputer, cable, CD, and a DVD, and a computer
15 accessory. They have many under the listed category.

16 Q (By Mr. Sayles) All right. And so the list of
17 products would go on for a long time if we went through
18 it?

19 A Right, very long.

20 Q Okay. And let's look at the rest of the home
21 page. And would you describe what -- what is shown
22 here?

23 A The rest of the home page is, most of all, the
24 deal and offering. You can see deal of the day, holiday
25 deal, and there's a deal page.

1 Q Deal of the day?

2 A Yes. Deal --

3 Q Holiday deal?

4 A Holiday deal. And also you can -- on the
5 bottom, you have some kind of the FAQ instructions, that
6 kind of stuff.

7 Q Who can access the Newegg website on to this
8 home page?

9 A Well, actually, anyone who own a personal
10 computer, also have ISP connection to the internet.

11 Also, they need to install the browser. She
12 or he can open the browser and then type the
13 www.newegg.com, then enter, then can access newegg.com.

14 Q All right. Now that we've taken a brief look
15 at the Newegg home page on its website, I want to take
16 you back to when you were first employed in the year
17 2000.

18 At that time, what sort of technologies was
19 Newegg using?

20 A During that time, we only use Fox Pro.

21 Q Fox Pro?

22 A Yes. Small-scale database system. We use Fox
23 Pro to manage the sales.

24 Q To manage what?

25 A Sales.

1 website, how did you do it? Let's just take it one step
2 at a time.

3 A First step, I needed to develop a functional
4 model.

5 Q Develop a functional model.

6 What was the second step?

7 A I needed to develop a use case.

8 Q Develop a use case?

9 A Use case.

10 Q And what is a use case?

11 A That means how the page link each other, the
12 use case.

13 Q How the pages link each other?

14 A Yes.

15 Q And then what was the next step?

16 A Then based on two, I needed to do the
17 programming.

18 Q All right. You needed to do the programming.

19 And then what did you need to do?

20 A Well, the programming I think through, I have
21 two choice, to recorder (sic) shopping cart event.

22 That's the question. I need the address.

23 Q All right. Let's see if I heard you

24 correctly. In the process of building the system, you

25 had a choice to make --

1 A Two choice.

2 Q -- regarding where you said recorder, but you
3 mean record?

4 A Yes.

5 Q Where to record what?

6 A Shopping cart event.

7 Q Shopping cart event.

8 What were the choices that you were faced with
9 as the designer?

10 A Well, number one, I needed to choose whether I
11 have to record everything to the central database on the
12 Microsoft SQL server side.

13 Q On the Microsoft SQL server side?

14 A Yes.

15 Q Is that the server that's over in Newegg?

16 A Yes, central side.

17 Q And you said you had a choice. What was the
18 choice?

19 A The second choice I have, I can utilize the
20 cookie on the customer computer side related to browser
21 to recorder (sic) all the shopping cart event.

22 Q To use a cookie on the customer computer to
23 record the shopping cart event?

24 A Correct.

25 Q All right. And which choice did you make?

1 A I pick up client cookie system.

2 Q And why did you -- as the designer and the
3 architect of this system, did you choose the client
4 cookie system to record the shopping cart event?

5 A Number one, as a skilled programmer, I knew a
6 lot -- a lot of the customer no going to the checkout,
7 just to the cart.

8 Q Okay. A lot of customers weren't going to
9 check out? So what? What does that mean?

10 A Well, I needed -- I -- I needed a central
11 database. I needed large storage, large server, many
12 memory to store everything you need to recorder (sic).

13 Q I see.

14 So if a user of the system didn't finish the
15 transaction, if you had a database on the Newegg side,
16 it would take up space that it didn't need to take up?

17 A That's right.

18 Q And so the choice you made was to use the
19 client cookie system?

20 A Yeah.

21 Q And were you familiar with the concept of
22 cookies from your background, education, training, and
23 experience?

24 A Yeah. The cookie is very straightforward, the
25 https, the protocol, the component; and at first, they

1 Q And why is it that, instead of you having to
2 work night and day, you didn't purchase a software
3 product for building and using an E-commerce site?

4 A Oh, there are several reasons. Number one,
5 company have the financial limitation. We don't have
6 the extra money to acquire the big software package.

7 Q You don't have the money to acquire a big
8 software package?

9 A That's right.

10 Q All right.

11 A Number two, we don't know the commercialize
12 the software because the time will be the successful if
13 we are using.

14 Q All right. Now, based on your knowledge and
15 experience, do many customers shop but not end up
16 checking out, for whatever reason?

17 A Yes. We have a lot of the customer shop into
18 cart, change quantity, but never checkout or checkout
19 later.

20 Q And you told us that one of the choices you
21 had was to use a customer cookie system to store the
22 shopping cart event. Would you tell us why you've made
23 that choice?

24 A The choice is -- is the natural choice for me.

25 Q A natural choice?

1 A Natural choice for me. Because cookie side of
2 the shopping cart event only utilized customer computer
3 storage to record the order event. And if I using the
4 database, central database to record order event, I knew
5 many customer just shop, add to cart, and change
6 quantity. But most of them never check it out.

7 Q Does a server-side database rely on a cookie?

8 A No, the server-side database system don't rely
9 on the cookie.

10 Q Are there differences to using a cookie-based
11 system to record the shopping event as opposed to the
12 server-side shopping cart?

13 A They do have some difference.

14 Q And are there advantages and disadvantages,
15 from Newegg's perspective?

16 A One is for user side disadvantage, number one.

17 Q Say that again.

18 A The customer, they have the disadvantage.

19 Q It has an advantage?

20 A Disadvantage.

21 Q Disadvantage. And what is that?

22 A Number one, if customer pay to cart on the
23 office's computer and go back to home to check,
24 everything is gone.

25 Number two, if customer has a multiple browser

1 over there.

2 Q That's solid state drives or disks?

3 A Yes, solid state disk.

4 Q And what happens on the Newegg website when
5 you click the add-to-cart button?

6 A If customer clicks the add-to-cart button,
7 then the item identification, the web server is going to
8 read identification and generate setup cookie command,
9 customer's browser download back html document which set
10 up a cookie command folder going to establish a cookie,
11 an eight-item identification into the cookie and with
12 quantity one.

13 Q Did you say an html command?

14 A Html instruction.

15 Q What is that?

16 A Html is the hybrid markup language. It is
17 the -- the web server generate html document, and in the
18 meantime the server set up the one string called set up
19 the cookie command.

20 Q If a customer wants to add another item by
21 clicking on add-to-cart, where does that item go?

22 A Follow the same process. Add-to-cart again.
23 The folder that receive the html document from the web
24 server and also going to add a single-line item which
25 item identification into the local cookie.

1 Q And the cookie is stored?

2 A On the customer PC side.

3 Q All right. And did you review, at my request,
4 a slide to help explain how the Newegg website works, as
5 a matter of fact?

6 A Yes.

7 Q Let's take a look at Demonstrative 21. And
8 would you describe how the Newegg system works just
9 using this demonstrative to explain it?

10 A Yes.

11 Q And just stick to the facts, all right?

12 A Yes.

13 Q All right.

14 A You can see this is the cookie side of system
15 currently Newegg is using. On the right-hand side of
16 the customer folder, and a little bit the cookie, and
17 the three-line item: Camera, battery, memory. On the
18 right-hand side you can see the Newegg, they have the
19 one --

20 Q On the left-hand side?

21 A Yeah, left-hand side. The triple W that
22 stands for worldwide web. And the two machines, one
23 machine called web server. On the top, one called
24 Newegg shopping cart database server.

25 So if customer finds first item called camera,

1 he or she clicks add-to-cart button. The camera listed
2 item identification, and is sent to the web server. Web
3 server read this item identification and it generate
4 html document and along with one string, which is called
5 set up cookie command.

6 Then click the browser, download html document
7 back to browser. The browser pick up one string, set up
8 the command, and establish this little cookie in one
9 string called camera equal quantity piece one.

10 Q Say that last part again.

11 A The browser going to establish the cookie
12 based on html instruction, and force a line item into
13 the cookie called camera quantity one.

14 Q All right. And is what we see on the left
15 side of the demonstrative labeled Newegg, servers that
16 are over at the Newegg facility?

17 A Yep.

18 Q And what we see labeled customer or client,
19 where would that be?

20 A Customer, that mean any user sitting in the
21 home or office that uses their computer to open the
22 browser we called customer side. They are not called
23 client.

24 The Newegg side is a server that is offered by
25 Newegg in our data center. The server have two kind of

1 server we have. One is called web server; on the top is
2 database server.

3 Q All right. And when a customer selects a
4 camera or a battery or memory, does Newegg add those
5 items at that time to its database on the Newegg side?

6 A No, because we choose cookie-base system, we
7 never add line item into the shopping cart database. We
8 just -- the browser, receive the html document and add
9 into the -- of the cookie. We never adding to database.

10 Q All right. Now, you mentioned to us earlier
11 before the break that one of the advantages of the
12 system is that it requires less computer space?

13 A Yeah.

14 Q All right. Now, just for the moment if -- if
15 you had made the choice to add the -- add-to-cart items
16 over on the Newegg side, how much more computer space
17 would you need?

18 A Based on my estimation to the time, if we put
19 in all the shopping cart information to the Newegg
20 shopping cart database, you can just store the one day.
21 Based on last year's data, we have a half million
22 add-to-cart event. Only 40,000 item to become final
23 order. That would be 15 times bigger required
24 infrastructure and including the server, including the
25 memory, including hard disk.

1 In general, we store the seven-day --
2 currently the cookie has a seven-day life cycle. If we
3 use seven day as the storing in the database side, it's
4 going to be 15 times 7. That's more than 100 times the
5 space capacity, memory need to be established on
6 Newegg's server side to holding as a solution.

7 Q All right. So in the notebook in front of you
8 there is a copy of DX81.

9 Do you recognize that?

10 A Yes.

11 Q Tell us what it is.

12 A This is the Newegg shopping cart page. Any
13 customer want to review how many line items in she or
14 her or his shopping cart, he can open this page to look
15 in the line item and the subtotal.

16 Q All right. Now, we can't see it very well
17 because we can't blow this one up, but in the right-hand
18 corner, the orange button down here, what is that?

19 A It's called checkout button.

20 Q And what is the checkout button?

21 A Checkout button is the -- we put it over there
22 for customer who start a purchase in the shopping cart.

23 Q And if a customer wants to make a purchase,
24 how many times do they hit checkout?

25 A Under last year's data, we still using the

1 half million add-to-cart operation, only 40,000 order
2 become final order. About 6 to 8 percent customer going
3 to hitting the checkout button.

4 Q 6 to 8 percent hit the checkout button?

5 A Yes. 6 to 8 percent.

6 Q And if a customer does indeed wish to check
7 out, how many times do they have to hit the checkout
8 button?

9 A Can you repeat the question?

10 Q Yes. If a customer does want to check out,
11 how many times do they hit the checkout button?

12 A You only need to hit the button one time. All
13 the data of the cookie value are going to be uploaded to
14 the Newegg's temporary shopping cart database just one
15 time. No matter one line, two line, nine line; just one
16 time.

17 Q All right. In the system that you developed,
18 is hitting checkout adding items into a shopping cart?

19 A Yes.

20 Q In the notebook in front of you, there are
21 copies of DX106. Do you recognize this?

22 A Yes. This --

23 Q Describe what it is, please.

24 A This page is we call order confirmation page.
25 Customer pay forward to submit final order. He or she

1 can review all the information he input, such as billing
2 and the payment and line item he wish to order.

3 Q All right. So we have in the lower right-hand
4 corner a button that says submit order?

5 A Yes. They have the button for customer wish
6 to complete a final order. He have the choice --

7 Q And that's different from checkout?

8 A That's different from checkout.

9 Q What is the difference?

10 A Only difference is here, if customer review
11 the final order, they can be able to click submit order,
12 become permanent, permanent order instead of temporary
13 data. And after click, Newegg, the web server, going to
14 pull all the temporary shopping information, including
15 line item, and all the billing, shipping, payment
16 information we collect; and we put it together into
17 order XML document sent to Newegg messaging
18 infrastructure for loading to our Newegg data center.

19 Q An XML order, was that that term you used in
20 that answer?

21 A Yes. XML order document for the loading to
22 our in-house data center.

23 Q Is that what you just described what happens
24 between a customer hitting checkout and a customer
25 hitting submit?

1 A Yes.

2 Q From your background, training, and
3 experience, do you know what the session identifier is?

4 A Yes, I do.

5 Q What is that?

6 A Session identifier really just is a creatable
7 web server and then client side collects the data and
8 stores in your local computer. Then append it on the
9 following your request, and sent back to the web server.
10 This generically may tend to state.

11 Q All right. And for a session ID to work, are
12 some actions required on the client computer?

13 A Yes, it does.

14 Q What actions?

15 A Make a selection. First of all, require the
16 client to storing session ID. Number two, client need
17 append session ID on the following the request. Number
18 three, the browser on local client side need to send
19 request along with the ID.

20 Q As the architect of the Newegg system, can you
21 tell us whether Newegg stores a session ID at the
22 customer computer?

23 A No, that's customer browser does.

24 Q Does Newegg add the item to messages at the
25 customer computer?

1 A Yeah, C pound.

2 Q And one of the other letters you mentioned was
3 ASP?

4 A Yes, ASP. ASP.net, yes.

5 Q And you mentioned MSMQ; what is that?

6 A That was the messaging for structure. We
7 using the MSQ, and we using the queue technology. That
8 mean if you sending over there this technology, we will
9 guarantee the message going to be delivered to
10 somewhere. It's one-time guarantee.

11 Q All right. And are these items that you used,
12 are these standard programming models?

13 A That was very standard offered by Microsoft.

14 Q All right. You've told us what source code
15 is. How many lines of source code are there in the
16 Newegg website, if you include all its functions?

17 A On the Newegg website for you just take away
18 the bottom line of this code, Newegg's website going to
19 have 636,000 lines of source code. That's the whole
20 website functionality.

21 Q 636,000 lines?

22 A Yes.

23 Q And how many line items of code consist of the
24 shopping cart in the session ID tracking functionality?

25 A Roughly less than 4,000.

1 Q Less than 4,000?

2 A Yes.

3 Q So what percentage of the source code that you
4 developed for the Newegg shopping center is related to
5 the shopping cart ID and session tracking function?

6 A If the number just you want together, we just
7 get is 0.66 percent related to the session and the
8 shopping cart. Point 66.

9 Q Point 66 percent?

10 A Yes.

11 Q Less than 1 percent --

12 A Yes.

13 Q -- of the total source code?

14 A Less than 1 percent.

15 Q All right. Besides the Newegg shopping
16 cookie, what other cookies does Newegg use to handle
17 shopping?

18 A Well, we use another one called the cart ID,
19 which is to facilitate three steps of the checkout
20 process.

21 Q And how are the shopping cart ID cookies
22 created?

23 A Oh, like I say, this cookie ID, because we
24 have this three-step with customer hitting the checkout,
25 we needed the one cookie to facilitate transaction in

1 case, prevent all the information lost. You hitting --
2 customer hitting the checkout button, the server just
3 makes the function call to number generate a table to,
4 just to say, give me the new number.

5 Q Okay. And have we prepared a graph for you to
6 explain how the Newegg system works in this regard?

7 A Yes.

8 Q And can you explain this very slowly?

9 A Yes.

10 This chart is -- just demonstrate how the
11 Newegg -- the checkout button in the several step, the
12 procedure.

13 If customer hitting the checkout button on the
14 shopping cart page, the web server going to the first
15 action, say take the number.

16 Q All right. Then what happens?

17 A Then second step, this number going to be
18 placed on the cookie.

19 The third step, the web server going to read
20 line item information of the shopping cookie, marry with
21 shopping cart ID together.

22 Q Marry it together?

23 A Marry shopping cart ID with cookie value,
24 which the item identification, along with quantity
25 together, insert into shopping cart temporary table is

100

1 one time.

2 Q All right. So whatever is on this cookie is
3 dropped into this temporary table that has taken a
4 number?

5 A Yes. It just takes number that we upload one
6 time.

7 Q All right. And then when the submit-order
8 button has happened, is clicked, what happens?

9 A If customer clicks submit-order button, the
10 web server just pull all the temporary information from
11 the server and combine with the payment, billing,
12 shipping information together, web server using this
13 information to create one XML, the document, and is
14 sending it to messaging system, such as MSQ, they wrote
15 it into the Newegg in-house data center for processing.

16 Q And that's what happens when you hit the
17 checkout button?

18 A That's what happen when you hitting on the
19 submit-order button.

20 Q All right. Why does Newegg need a shopping
21 cart ID to identify this shopping cart data?

22 A Because we have this three steps in the
23 checkout process. We needed one number to prevent that
24 information to loss. So this number just can be
25 arbitrary number to protect the data loss for the

1 three-step page.

2 Q Now, has Newegg grown and thrived since you've
3 been there since 2000?

4 A Yes.

5 Q And you told us that at the beginning of your
6 work you had a fork in the road between developing a
7 system based on a server side database or a customer
8 cookie system?

9 A Yes.

10 Q Now that the company obviously has many more
11 resources than it had back in 2000, has Newegg changed
12 that architecture and that system that you designed?

13 A No.

14 Q And why are you still using that design even
15 though you programmed it in 2000 with so little
16 resources?

17 A Well, Newegg is number-one performer in term
18 of the responding time because our whole -- Newegg's
19 architecture, the shopping cart, Newegg is number-one
20 performers in the world. We happy with our performance,
21 so we stick with our solution.

22 Q You're happy with the performance so you'll
23 stick with it?

24 A We are number one now.

25 MR. SAYLES: Pass the witness.

1 the firewall does the same function, too.

2 Q If that was the type of person who got on the
3 website that you designed, they couldn't complete a
4 transaction, correct? If you don't have cookies turned
5 on on the customer side, they can't buy anything from
6 your system?

7 A Right.

8 Q And that's the way you designed it?

9 A That's the condition, yes.

10 Q That's the way you designed it, right?

11 A We try to design like this way.

12 Q Now, Newegg also -- not Microsoft, but
13 Newegg -- programmed the shopping cart cookie, I think
14 you call it NV, low underlining, Newegg cookie?

15 A We don't program the cookie. The cookie --
16 the cookie is broader functionality. Newegg only
17 generates html document. Html document will contain one
18 string called cookie instruction. What happen, customer
19 browser download html document back from Newegg server.
20 The browser going to promote action based on html
21 string. We don't program the cookie.

22 Q All of which you designed the system to do,
23 correct?

24 A We only design the system to generate html
25 document.

1 Q With respect to the cookie as you just
2 described it, correct?

3 A With the cookie with respect only the string
4 of the cookie instruction.

5 Q But that's what Newegg did? Microsoft didn't
6 do that for you; you did it?

7 A Yes, that's -- we did it, yes.

8 Q And the functionality of the cookies as they
9 worked in your system that you designed, you did that,
10 not Microsoft, correct?

11 A The functionality of the cookie, or the
12 nature, is introduced by Netscape. All of the browser
13 have the nature -- the cookie, the behavior. We didn't
14 develop no cookie. We just developed html document,
15 which generate from the web server or the string, what
16 string contains html cookie instruction.

17 Q You took advantage in the system you designed,
18 of how you knew Netscape cookies and other cookies
19 worked, right?

20 A That's common sense. Every people --

21 Q Well, I agree with you it's common sense. But
22 that's what you did, not Microsoft, right?

23 A Yes.

24 Q Now, a little earlier I asked Mr. Sayles to
25 repeat back one of your answers. Do you remember when I

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1 just saw on your last slide; and either the information
2 was then passed to shipping and payment, or you'd hit
3 the end of the business day, whichever came first,
4 right?

5 A Yeah.

6 Q So it was stored; it was just a question of
7 for how long?

8 A The question is stored a whole lot because why
9 we call temporary, the nature, we don't have the data.
10 We just needed the temporary data stored in the
11 temporary table for three-step transaction. That's
12 another reason we even have daily the job to purge this
13 data.

14 Q Yes, but that's my point. The data, once
15 checkout was pushed in that circular diagram we just
16 looked at, the data goes into the shopping cart
17 database. And when you say it's temporary, it stays in
18 there either until the rest of the sales transaction is
19 completed or you get to the end of the business day and
20 then you purge it, right?

21 A Correct.

22 Q When the shopping cart database comes from the
23 cookie, whether it's one item, two items, three items,
24 and goes into the shopping cart database, that changes
25 the contents of the shopping cart database, doesn't it?

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1 A No. Just one time to insert; never change,
2 never modification.

3 Q No, the insertion --

4 A Is the insert --

5 Q The insertion changes the contents of the
6 database, doesn't it?

7 A No.

8 Q First there's nothing.

9 A They just user one row in line. It's not a
10 change; it's just an insert only, upload only.

11 Q Let's see if we can agree with this. Before
12 the insertion, the shopping cart database for that
13 particular customer and transaction is empty, right,
14 before the insertion?

15 A It's not empty. It's nothing.

16 Q Well, nothing is empty, right?

17 A Empty is not nothing.

18 Q Well, in any event, let's say there's nothing.

19 After the insertion, in the shopping cart
20 database, at least temporarily, there's all the
21 information relating to what the person wants to
22 purchase; is that correct?

23 A Just one time from nothing becomes a record.

24 Q Is what I said correct? I am going to ask you
25 the question one more time. I'm trying to be very

1 specific about the question.

2 When the information from the cookie goes into
3 the shopping cart database, we go from nothing --

4 A Nothing.

5 Q -- to all of the information that was on the
6 cookie being stored in the shopping cart database,
7 correct?

8 A Just insert as one time, yes.

9 Q Well, one time or whatever, it's in there and
10 it's being stored in the shopping cart database,
11 correct?

12 A Temporary stored.

13 Q Temporary meaning until either we complete the
14 sales transaction or it's time to go home and we purge
15 the system at the end of the business day, right?

16 A Correct.

17 MR. ADAMO: I have nothing further, Your
18 Honor. Thank you.

19 THE COURT: Any redirect?

20 MR. SAYLES: May it please the Court.

21 REDIRECT EXAMINATION

22 BY MR. SAYLES:

23 Q Mr. Wu, have you ever testified in a courtroom
24 in front of a jury before?

25 A No, never.

1 Q Good to see you again. I have a number of
2 questions, and I think we can go through this pretty
3 quick.

4 When you were at DEC Cambridge research lab,
5 you did work with the internet; isn't that correct?

6 A That's correct.

7 Q And at that time you were familiar with the
8 tools of the internet, such as html?

9 A Yes.

10 Q Http?

11 A Yes.

12 Q And URLs?

13 A Yes.

14 Q What is html again?

15 A Html is the language we use to describe what
16 is presented on a web page.

17 Q And http is?

18 A Http is the protocol or the method of
19 communication between a web browser and a web server.

20 Q And a URL is what?

21 A URL is the name or the address of a web page.

22 Q And were you also familiar with the anchor
23 feature of html?

24 A Yes.

25 Q And what is the anchor feature of html?

1 A The anchor feature lets a URL specify not only
2 the web page but a particular part of the web page, like
3 a paragraph somewhere on the page.

4 Q And isn't it a fact that this is the basis of
5 hypertext when working with the worldwide web?

6 A URLs are the links we use in the worldwide
7 web, yes.

8 Q And not one of these items, html, http, URLs
9 or hypertext links, were invented by DEC or Open Market;
10 isn't that correct?

11 A That is correct.

12 Q Now, just before -- well, during the time you
13 were at DEC, you -- did you work with the mosaic
14 browser?

15 A Yes, I did.

16 Q And was the mosaic browser the first graphic
17 user interface type browser?

18 A It was the first one that I used.

19 Q And can you explain to the jury what is a
20 graphic user interface browser?

21 A A graphic user interface browser is one that
22 can use pictures, drawings, and text as well as colors,
23 different fonts, and things like that, to provide a rich
24 presentation of information.

25 Q And isn't it a fact that neither DEC nor Open

1 Market invented or developed the mosaic browser?

2 A That's correct.

3 Q And, in fact, it was developed by the NCSA, or
4 the National Super Computer Applications organization
5 that was at the University of Illinois?

6 A That's correct.

7 Q Now, when you worked at DEC, did you also work
8 with a server that was available from NCSA, a web
9 server?

10 A I believe we did, yes.

11 Q And when you went to Open Market, is that not
12 the web server that you worked with?

13 A That's the web server software we used
14 initially.

15 Q And isn't it a fact that no one at DEC or at
16 Open Market developed NCSA web server?

17 A We did not develop at Open Market the original
18 server software from NCSA.

19 Q And isn't it a fact that the web server, NCSA
20 web server, had a feature called common gateway
21 interface?

22 A Yes, it did.

23 Q And can you explain what the common gateway
24 interface is?

25 A The common gateway interface was a way for a

1 web server to communicate with another program that was
2 going to provide information back to the user.

3 Q And that was invented by NCSA, correct?

4 A I don't recall if that was originally from
5 NCSA.

6 Q But it was part of the NCSA web server that
7 you worked with at Open Market?

8 A Yes. The web server did implement the common
9 gateway interface.

10 Q And isn't it a fact that, when the shopping
11 cart database was implemented at Open Market, it was
12 implemented using a commercial database management
13 system called Sybase?

14 A We used the Sybase database product to store
15 the information for the shopping cart.

16 Q The Sybase database was not developed by Open
17 Market, correct?

18 A That's correct.

19 Q And isn't it a fact that in the development of
20 the technology that's been incorporated in the
21 application for the '314 patent, the Sybase database was
22 connected to the NCSA server using the CGI function?

23 A The -- our application code communicated with
24 the web server for the common gateway interface. Then
25 the application software that we developed made calls to

1 the Sybase database software.

2 Q And were those calls facilitated by use of a
3 language called Tcl?

4 A The language that we used for writing the
5 software code for many of those applications was called
6 Tcl.

7 Q And was there not a kit of Tcl available
8 publicly to connect web servers using CGI to the Sybase
9 database that was used by Open Market?

10 A There was a tool kit for communicating with
11 the Sybase database from a Tcl application.

12 Q And the Tcl kit was not invented or developed
13 by Open Market; is that correct?

14 A Are you referring to the Tcl database?

15 Q Well, let's take them one at a time. The Tcl
16 language to begin with?

17 A The Tcl language and the software used to
18 implement the language were not developed at Open
19 Market.

20 Q And what about the tool kit?

21 A The tool kit for communicating with the
22 database was not developed at Open Market.

23 Q And earlier we covered the fact that, when the
24 '314 patent was filed, the patent itself did not teach
25 or enable one to transfer credit card numbers over the

1 internet encrypted?

2 A We talked yesterday about the software did not
3 implement that function.

4 Q Correct.

5 And isn't it a fact that cookies were not
6 invented by Open Market?

7 A Cookies were not invented by Open Market.

8 Q And isn't it a fact that the SSL protocol that
9 enables the transfer of encrypted information over the
10 internet was not invented by Open Market?

11 A The SSL protocol was not invented by Open
12 Market.

13 Q Now, Mr. Treese, have you written a book?

14 A Yes, I have.

15 Q And who was your coauthor?

16 A Dr. Stewart.

17 Q And did you and Dr. Stewart make every attempt
18 to make that book accurate and complete?

19 A Yes, we did.

20 Q And did it come out in two versions?

21 A Yes, it did.

22 Q And was the second version published in around
23 2003?

24 A That's correct.

25 Q Now, do you recall in that book that you

1 described three places where a shopping cart might be
2 placed: Server side, client side, and then a
3 protocol-based shopping cart?

4 A Yes, that's the way we described it.

5 Q And is that an accurate -- was that an
6 accurate description of the situation when you were
7 working developing the subject matter that's set forth
8 in the '314 application?

9 A We had some understanding about those
10 characteristics at that time.

11 Q And isn't it a fact that the -- that there was
12 no way, at the time the '314 patent application was
13 filed, to implement a cookie-based shopping cart?

14 A There was no means to implement a cookie-based
15 shopping cart available to us at that time.

16 Q How would you characterize a cookie-based
17 shopping cart, as client side or protocol based? I
18 forget how you put it the last time.

19 A I believe we would classify it as a
20 protocol-based shopping cart.

21 Q Is that because the cookie goes back and
22 forth?

23 A That's correct.

24 Q So isn't it a fact that the only way to
25 implement a shopping cart that's described in the

1 application for the '314 patent is a server-side
2 shopping cart?

3 A I don't think that's the case.

4 Q And why do you say that?

5 A On the -- my recollection is that the
6 description in the '314 patent refers to the server
7 updating a database. It does not specify where the
8 database is kept.

9 Q Well, maybe you didn't understand my question.
10 What I'm saying is that the only description of -- of a
11 way to do a shopping cart set forth in the '314 patent
12 is one that's server side?

13 A It's a description of the server managing the
14 contents of a shopping cart.

15 Q And do you recall that you were deposed in
16 this application (sic)?

17 A Yes, I was.

18 MR. HANSON: Excuse me, Your Honor.

19 THE COURT: Uh-huh.

20 Q (By Mr. Hanson) Well, let's go on.

21 When Open Market came to work in what, about
22 May of 1994, was there a feature of html called basic
23 authorization?

24 A Basic authentication, yes, there was.

25 Q Authentication. Thank you.

1 And can you explain to the jury how basic
2 authentication worked?

3 A Basic authentication was a simple mechanism
4 that, when you would -- when a web browser would connect
5 to the web server, the web server would say, before I
6 can give you that page, I need to identify you. And the
7 web browser would prompt the user for a name and a
8 password and send that along with a repeat of the rest
9 of the request, thus identifying the user to the
10 browser -- to the server.

11 Q And every time a server requested
12 authorization again, isn't it a fact that the client
13 browser would automatically send back the authorization?

14 A Yes, it would. You wouldn't have to be
15 prompted for it again.

16 Q And isn't this the way that -- well, I think
17 you testified regarding what a session was and what a
18 state was, and I believe you said shopping cart would be
19 an example of a state; is that correct?

20 A Shopping cart items are an example of state
21 maintained in a web session.

22 Q And if there are multiple users accessing a
23 server, there has to be some method to keep the states
24 separate -- the state of one user separate from the
25 state of another user; is that not correct?

1 A That's correct.

2 Q And is that -- is that the reason for
3 sessions?

4 A That's part of the reason for sessions.

5 Q But that is a way session is implemented?
6 Let me restate the question.

7 How was session implemented to maintain the
8 shopping cart described in the '314 patent application?

9 A I don't recall the precise specification of
10 those mechanisms.

11 Q Wasn't it a fact that basic authentication was
12 used to keep track of the user, and basic authentication
13 was used repeatedly to identify the correct shopping
14 cart?

15 A To the best of my recollection, we used basic
16 authentication to identify the users but not to identify
17 individual sessions.

18 Q And have you discussed this recently with
19 Dr. Stewart?

20 A No, I have not.

21 Q Is it not a fact that in your book, you and
22 Dr. Stewart have said that basic authorization can be
23 used as a means of keeping track of sessions?

24 MR. ADAMO: Excuse me, Mr. Hanson.

25 Could you be clear which edition, first or second?

1 Thank you, Your Honor. I'm sorry.

2 Q (By Mr. Hanson) Second edition.

3 A In the second edition we say that session
4 mechanisms can be built out of authentication
5 mechanisms.

6 Q Thank you.

7 Behind you I believe there is a copy of
8 Plaintiff's Exhibit 1, which is the '314 patent. And if
9 you will look at Figure 1.

10 MR. HANSON: And if you can blow up the
11 figure at the bottom. Thank you.

12 Q (By Mr. Hanson) Mr. Treese, is that an
13 accurate description of the system that's described in
14 the text of -- of the '314 patent?

15 A It's a diagram that reflects some of the
16 aspects of what's described in the text.

17 Q And there is listed there on the upper
18 left-hand side, buyer computer.

19 Is that the customer computer?

20 A That would be correct.

21 Q Then there's shown a network in between.
22 Would that be the connection between the buyer computer
23 and server?

24 A Yes. Usually the internet.

25 Q Then there is then a payment computer. Is --

1 is that a web server that is used to support a shopping
2 mall of some sort?

3 A It's a system that supports the transaction
4 processing, the user information shopping carts.

5 Q And is that also the server that distributes
6 the catalog pages to the buyer computer?

7 A In this -- in this diagram, no, it is not.

8 Q And where are the pages sent -- collected and
9 sent to the buyer computer?

10 A The catalog pages come from the merchant
11 computer, labeled 14.

12 Q Okay. And there is an item 21 that's called
13 the shopping cart database?

14 A That's correct.

15 Q And is that hung off of the payment computer?

16 A Yes, it is, in the diagram.

17 Q And it's not hung off of the buyer computer?

18 A That's correct.

19 MR. HANSON: Pass the witness.

20 Pass the witness.

21 MR. ADAMO: Oh, I'm sorry, I didn't hear
22 you.

23 THE COURT: Cross -- I mean direct exam?

24 MR. ADAMO: Redirect, Your Honor,
25 briefly.

1 which included electronic mail, user forums, chat;
2 educational services like an online encyclopedia;
3 financial, you know, including stock prices; news,
4 weather, sports; online games, Dungeons and Dragons and
5 all kinds of fun stuff; shopping, including electronic
6 mall, airline ticketing, and software for downloading.

7 Q Can you give the jury an overview of the
8 electronic mall that you've just described?

9 A Yes. The electronic mall was E-commerce for
10 consumers. Basically you could shop and buy things
11 online. The way you did it was, you needed a personal
12 computer with communication software loaded, and
13 typically a telephone modem, since that's how most
14 people communicated in those days. You would make a
15 dial-up connection to a CompuServe node computer.

16 Sorry about the popping.

17 Once connected to the CompuServe servers, you
18 would be presented with a top-level menu. One of the
19 choices would be the electronic mall or shopping. Make
20 that choice, navigate a few more menus. You'd get to
21 the -- you'd enter the electronic mall. There, you
22 could make a choice of one of a hundred different
23 stores.

24 Select the store you wanted to shop. Enter
25 the store. And there you could browse for the --

1 whatever products that vendor had to offer on line.

2 If --

3 Q If you could break it up a little bit. You
4 say you could -- when you got to the store you could
5 look for various products; is that correct?

6 A Yes.

7 Q And how were the various products presented to
8 you?

9 A They were presented as menus. So, it was a
10 way to search for products. But when you found a
11 product that interested you, you could get a detailed
12 description of the product, and in some cases there was
13 a photograph so you could look at it.

14 If you wanted to purchase it, you would type
15 the order command, which was abbreviated by the letter
16 O, and that would update your electronic shopping cart
17 with the item.

18 And then you could continue to shop, or you
19 could get some more items and put them in your shopping
20 cart, or you could check out from the store, at which
21 point you'd be prompted for your billing information,
22 including a credit card.

23 And you'd also have the opportunity to review
24 your selections in your shopping cart. And you could --
25 if you changed your mind, you could check the whole

1 thing or you could delete individual items.

2 But once you were satisfied that this is the
3 stuff you wanted to buy, then you would acknowledge
4 that, and the host computer would respond with a
5 confirmation code, an order confirmation code.

6 Q Could you purchase more than one product at a
7 time from a vendor or merchant on the mall?

8 A Absolutely. You could purchase -- I think
9 there was a limit of about 40 items that you could put
10 in your shopping cart at one time. Yes, more than one
11 definitely could you go in your shopping cart.

12 Q So you could -- the customer could select up
13 to about 40 items if they wanted -- it sounds like a lot
14 to do on shopping -- but before they checked out; is
15 that what you're telling us?

16 A Before they checked out, they would shop,
17 select items by pressing the order command. They could
18 do that multiple times, each time would update or cause
19 the host computer to update the user's electronic
20 shopping cart with the selection.

21 As I said, there was a limit of about 40. I
22 don't think many people put 40 things in their shopping
23 cart.

24 Q Now, if a menu presented a choice of more than
25 one product, how would the customer select that product?

1 A In the initial version of the electronic mall,
2 which was text oriented, you would look at a menu, and
3 there would be a number beside each menu item. So if
4 you wanted the first book, for example, in the menu, it
5 would be number 1, so you type the number 1 followed by
6 a carriage return. Today they call it enter key.

7 Q When was the CompuServe electronic mall first
8 available?

9 A 1984.

10 Q And by May of 1984 -- now skipping ahead, I
11 guess. By May of 1994, what equipment did CompuServe
12 have?

13 A In May of 1994 CompuServe was supporting over
14 a million and a half customers over a hundred 36-bit
15 host computers or servers, two of which were dedicated
16 to the electronic mall, plus about a hundred 32-bit
17 servers in data storage devices and data communications
18 equipment.

19 Q I think you explained this a little bit, but
20 by 1994 how did personal computer users connect to the
21 CompuServe information service?

22 A Again, you needed a personal computer with
23 communication software installed.

24 At that point in time you could connect your
25 computer to CompuServe through the internet or through

1 several other third-party networks. But typically users
2 would make a dial-up connection to a local CompuServe
3 node computer.

4 In either case, a logical circuit was
5 established between your PC and the CompuServe host
6 computer. And that logical circuit was maintained for
7 the duration of your session on CompuServe.

8 Q Was that circuit a secure circuit?

9 A It was certainly a lot more secure than the
10 connection over the internet. It didn't go through
11 university basements or anything. But it was relatively
12 secure.

13 Q And CompuServe solicited customers' credit
14 card numbers, did they not --

15 A Yes.

16 Q -- over that network?

17 A CompuServe customers transmitted their credit
18 cards over that network, and we never had any trouble
19 with people having their credit cards ripped off, other
20 than social engineering, which existed even back then.

21 You know, on chat somebody would say, hey, I'm
22 CompuServe, give me your credit card. That kind of
23 thing existed even back then.

24 Q Did CompuServe make available to its members
25 and customers software for installation on personal

1 computers so that they could communicate with

2 CompuServe?

3 A Yes. Communication software wasn't as

4 prevalent in the early days as it is now, so CompuServe

5 developed a line of smart terminal software called

6 Vidtex for most of the popular -- most of the popular

7 personal computers at the time. That included the

8 Commodore 64, Ataris, Apple 2s, TRCs, and the IBM PC.

9 The version for the IBM PC was called The Professional

10 Connection.

11 All of those small terminal programs included

12 auto log-on, which meant you didn't have to dial up the

13 number and type all your stuff every time you wanted to

14 log on, cursor addressing, some graphics capabilities,

15 and error-correcting file-transfer protocols.

16 Q Now, you've explained to us about the

17 CompuServe network, but were other networks -- was it

18 possible that other networks could be used for a

19 customer to connect to CompuServe?

20 A Yes. From fairly early on, CompuServe

21 supported international networking standards and

22 interfaced with other public packet networks.

23 Domestically that included networks called Tymnet and

24 Telenet, and internationally Datapack in Canada,

25 TransPack in France, and a number of others. And as I

1 mentioned, by -- certainly by '94 it included the
2 internet as well.

3 Q You better explain that because that's going
4 to -- did you just say the internet by '94?

5 A Yes.

6 Q And how was that accomplished?

7 A It was accomplished via a TELNET -- TELNET
8 protocol connection.

9 Q And not the worldwide web?

10 A No.

11 Q Did you personally use the CompuServe
12 electronic mall to purchase products?

13 A Yes. As part of my responsibility as chief
14 technical officer, I had to be familiar with and test
15 out all of CompuServe's new products. So I tested many
16 aspects of the electronic mall, including selecting a
17 store, checking the proper updating of the electronic
18 shopping cart when an item was added or deleted from the
19 shopping cart, the checkout process. And I personally
20 bought items from the electronic mall using my personal
21 credit card.

22 Q Well, can you tell us what specific
23 responsibilities you had with regard to CompuServe
24 electronic mall prior to May of 1994?

25 A The systems analysts and programmers who

1 developed and maintained the electronic mall reported to
2 me.

3 Q And I believe you already said this, but isn't
4 it the case that the CompuServe computers accumulated
5 and held the customers' product selections prior to
6 checkout?

7 A Prior to checkout, a customer's selections
8 were held in a personal order file or electronic
9 shopping cart that was an in-memory database in the
10 file. It was specific to each customer.

11 Q Now, as a CompuServe -- as CompuServe evolved,
12 it developed different modes of interacting with its
13 members; is that correct?

14 A CompuServe developed a -- as I mentioned
15 earlier, CompuServe was text oriented.

16 Q And that's where I wanted to start. What did
17 you mean by text oriented?

18 A Basically -- I mean, you didn't have any
19 graphics to speak of. What you saw on your screen was
20 text. You interacted by typing on your keyboard and
21 seeing text displayed on your screen.

22 Q I believe that before you is a copy of
23 Defendants' Exhibit 2, which is a book by Messrs. Bowen
24 and Peyton, and it's the fourth edition. Do you have it
25 in front of you?

1 A I do, yes.

2 Q And that book is called How to Get the Most
3 Out of CompuServe.

4 A Correct.

5 Q Do you see the fourth edition at about the
6 time it was published in 1989?

7 A Yes, I did. And I got a personal copy at that
8 time. In fact, it was a copy signed by one of the
9 authors.

10 Q And is that the only edition of the Bowen and
11 Peyton book that you have?

12 A No. I still have copies of the second, third,
13 fourth, and fifth editions. I don't know if I have a
14 first edition.

15 Q Is there any question that the authors had
16 access to CompuServe and CompuServe Mail when they wrote
17 their book?

18 A There's no question. The authors were members
19 of CompuServe. They -- they provided their e-mail
20 addresses, the CompuServe e-mail addresses in the book,
21 and asked readers to communicate with them. And they
22 couldn't received or send e-mail if they didn't maintain
23 a CompuServe account. Plus I know they had access to
24 CompuServe's marketing and technical people.

25 MR. HANSON: I wonder if we could bring

1 up Page 331 of Exhibit 2 and look at the screen shot at
2 the top of the page. Maybe you can blow that one up.

3 Q (By Mr. Hanson) And can you explain to us
4 what the purpose of this screen shot is, or this screen
5 is.

6 A This is a screen that you would see once you
7 the entered the Walden Books online store and worked
8 your way down through book categories until you got down
9 to a choice of two books. At this point you could
10 select either of these two books.

11 Q And how was that selection made?

12 A You would enter the number corresponding to
13 the book you were interested in followed by a carriage
14 return.

15 Q And then what would happen?

16 A And then you'd be -- then a detailed
17 description of the book would be displayed, followed by
18 a prompt for the O command.

19 Q Okay. I think we have another screen that we
20 could show on this page that shows where the -- where
21 the O command is.

22 A Right.

23 Q Is that a representation of a page that would
24 come to the user after making the selection 1 or 2, and
25 would also describe the book that had been selected?

1 A That would be at the bottom of the description
2 page.

3 Q What we're seeing is what would be at the
4 bottom of the description page?

5 A That's correct. Yes.

6 Q The description is not shown, that's what I --

7 A That's correct. The description is not shown.

8 Q Then what would happen when the O -- O command
9 was entered?

10 A Then the electronic shopping cart would be
11 updated with this selection and retained there while the
12 user shopped.

13 Q And how would the CompuServe servers know what
14 product to put in the shopping cart or the personal
15 holding file?

16 A Well, the user had just selected one item
17 before typing the O command, and the host computer
18 remembered that selection.

19 Q Are these screens typical of those that were
20 available in 1989 on the CompuServe Mall?

21 A They were typical of the text or ASCII version
22 of the electronic mall.

23 Q Could the customer change their mind after
24 they had entered the O command?

25 A There were two ways. They could type an exit

1 command, which would have abandoned the entire shopping
2 cart; or, after typing the checkout command, they would
3 be presented with a review screen where they could
4 modify or delete items individually.

5 Q Well, how -- how did you get to where you had
6 to pay? What did you have to do next in order to pay
7 for the goods once you decided to purchase them?

8 A You would type the checkout command. You
9 would be taken to a checkout area, which is where you
10 get a chance to review all the items in your shopping
11 cart. So you'd see the quantity, the description, the
12 price of each item.

13 You could -- at that point you could modify it
14 or accept it. And you would be prompted for billing
15 information, including credit card typically. And then
16 the next thing, after you accepted that you'd get a
17 confirmation number.

18 MR. HANSON: You can take that screen
19 down, please.

20 Q (By Mr. Hanson) Was it necessary for the
21 users to have become members of CompuServe before they
22 could use the CompuServe Mall?

23 A Yes, it was.

24 Q And how did they become members?

25 A Through an online sign-up process.

1 Q And was there a charge of some sort to
2 maintain your membership?

3 A Yes. There was a monthly charge.

4 Q And how did -- how did they CompuServe collect
5 that monthly charge?

6 A In most cases it was done by credit card.

7 Q Was it possible for someone entering into a
8 mall -- mall store or merchant's store to purchase goods
9 and somehow charge it to CompuServe?

10 A Not in the electronic mall, but there were
11 other places in CompuServe where you could do that.

12 Q Now, we've talked about the ASCII version or
13 the text version service that was developed early on.

14 As the serviced developed, did they come out
15 with different modes of interacting with the CompuServe
16 Mall?

17 A CompuServe developed a high-level application
18 protocol in 1989 called HMI, host micro interface.
19 However, the electronic mall was not implemented in HMI
20 until March of 1994.

21 Q Did -- and let's keep -- this is a little bit
22 tricky here, this area we're going into.

23 Did CompuServe provide something called DOSCIM and
24 WINCIM?

25 A Again, back to 1989 when CompuServe developed

1 interface. But Bowen and Peyton, for example on 321,
2 they talked about the function of the order command.
3 And they say this is a common prompt in the electronic
4 mall. If you want to order products you have to simply
5 enter 0 and the system knows it.

6 Okay. So what does knows it mean? It means
7 the host computer has to make a record of it. You know,
8 any programmer knows that that means you got to write it
9 someplace. It doesn't give the name of the file, but a
10 programmer wouldn't need that in order to understand
11 what's involved in that function.

12 Q Is there any description in that book of the
13 software that would be needed to implement that, any
14 description in there?

15 A As I said, this is a description from the
16 user's point of view.

17 But software engineers have reversed engineered
18 applications on less than this.

19 Q The answer is, it's not there; is that
20 correct?

21 A This is -- there's no specific implementation
22 information in these books.

23 Q That was my question. Thank you.

24 Now, when that order button is pushed, in the
25 example that you went through, I take it a message is

1 sent from the client to the host to the server; is that
2 right?

3 A Yes.

4 Q Is that what would happen?

5 Is there any description in those books of the
6 format or how that message would be put together, for
7 better -- lack of a better word? I'm looking for some
8 technical description of what that message would be in
9 those three books.

10 A All the pages describe the O command. Anybody
11 with a little technical knowledge knows that.

12 Q That's not my question. My question is, is it
13 in the book?

14 A It says enter the O command.

15 Q It doesn't say what happens, what messages go
16 from the client to the server when you push that button
17 and when you enter that command, does it?

18 A It doesn't say that, no.

19 Q Now, you also in your testimony, I think you
20 dropped the word database maybe a couple of times; is
21 that right?

22 A I think I did.

23 Q Okay. Where in those books is there a
24 description of how that database would be implemented?

25 A As I said, these books don't -- are not

1 implementation guides. I have, you know, personal

2 knowledge of how the system worked.

3 Q So, in other words, it's not in there?

4 A But anybody is going to know if you type a

5 command --

6 Q It's not in there, is it?

7 A But if you type a command on the terminal

8 program, it's connected to a server, it's going to go to

9 the server.

10 Q It doesn't tell you what that message is, does

11 it?

12 A It tells you it's the letter O.

13 Q And is that all the message is, is the letter

14 O?

15 A The code for the letter O followed by a

16 carriage return.

17 MR. GIANNETTI: Would you pull up the

18 slide?

19 Q (By Mr. Giannetti) I am going to put a slide

20 up and I'm going to...

21 Okay. So now this is a slide from your

22 presentation and this is a point -- can you see this on

23 your upon for

24 A Yes.

25 Q This is a point you went through that

1 Q But in both systems at the time that you made
2 the decision to order and indicated it either by typing
3 in an O or clicking on the order button, it's only one
4 product; is that right? One product's been selected?

5 A That's right, yes.

6 Q So at that point, there would be no need to
7 include, in the message that went between the client and
8 the server, information about what product was being
9 selected; isn't that true?

10 A In a previous message, though, in a previous
11 message the user has selected the product.

12 Q But for that message, there's no need, is
13 there?

14 A For the order command, there's no need to
15 select or provide information, because the product has
16 already been selected. We're only talking about one
17 product at this I point in time.

18 Q So the message that goes from the client to
19 the host or the server, in each case, when an order is
20 placed by either clicking on the button or entering the
21 O, did not contain an identification of the product in
22 either system; isn't that right?

23 A That's correct.

24 Q Now, you mentioned a personal holding file
25 that's mentioned in one of these documents. I think

1 they could build a website that would include E-commerce
2 capabilities, such as a shopping cart and payment
3 handling, and manage financial records to keep track of
4 payments.

5 Q I'd next like to bring to your attention
6 Defendant's Exhibit 65, which is Foundations of
7 Worldwide Web Programming With HTML and CGI.

8 This book is written by Ed Tittel, Mark
9 Gaither, and others. Are you the Ed Tittel referenced
10 on the cover of this book?

11 A Yes, I am.

12 Q What is the subject matter of this book, sir?

13 A When web servers were first built, they really
14 didn't have much ability beyond displaying pages of text
15 to users for them to look at information.

16 CGI stands for common gateway interface, and
17 it was a technology that was developed in the '92/'93
18 timeframe that allowed the web server to talk to other
19 programs so that it could communicate with the database,
20 perform calculations, access libraries of images; in
21 other words, extend the capability of a web server to
22 more than just put text and images up on the screen.

23 Q I'd next like to turn your attention to
24 Defendant's Exhibit 63, which is the CGI Bible.

25 This book says it's written by Ed Tittel and a

1 few others. Are you the Ed Tittel referenced on this
2 book?

3 A Yes, I am.

4 Q Now, first of all, what is CGI?

5 A CGI, again, is the common gateway interface.
6 It is the programming interface that allows a web server
7 to call some other program so that it can do something
8 for it.

9 Basically, web servers can grab files and push
10 them to users in a lot of cases. Especially when you
11 want to have a user interact with a web page, a back-end
12 program accessed through CGI was the original way to add
13 that kind of capability to a website.

14 Q By the way, when was this one written?

15 A The CGI Bible has a publication date of 1997.

16 Q Okay. I just asked because the copy that we
17 have has a price tag on it where it says: Clearance \$3.
18 So I guess this one is not doing so well.

19 A Nothing is as cheap as old technology.

20 Q Next, I'd like to bring your attention to
21 Defendant's Exhibit 662, which is my favorite, HTML for
22 Dummies by Ed Tittel and Stephen James.

23 Are you the Ed Tittel?

24 A Yes, I am.

25 Q What is html?

1 A Html stands for hypertext markup language, and
2 it refers to a collection of elements that you can put
3 into a text file to control what happens when that text
4 file shows up at a web server.

5 You can change the color of the font. You can
6 change the type of font. You can change the position of
7 elements on the page. You can bring in graphics. You
8 can bring in other elements and objects. And html
9 basically handles all of that capability.

10 Q How many editions of HTML for Dummies have you
11 written?

12 A As of 2008, that book has gone into its 12th
13 edition.

14 Q Have you contributed any other volumes to the
15 four Dummies series?

16 A Yes. I have written Dummies books on Novell
17 Netware, on Windows server, on xhtml, and we even had a
18 book out for a while called More HTML for Dummies.

19 Q I bet that was great.

20 A Right.

21 Q Have you written any articles on
22 computer-related topics?

23 A I started writing articles for publication in
24 1986 for a Macintosh magazine called The Macazine.

25 And then next -- that next year when I went to

1 A My understanding is that if Newegg fails to
2 satisfy a single limitation of the claim, it fails to
3 infringe.

4 Q Now, I don't want to belabor this point, but
5 listening to the testimony here this week and just based
6 upon common sense, do you agree that Newegg does not
7 supply at least the one buyer computer and the user?

8 A Absolutely.

9 Q I couldn't decide whether to use red or black.
10 Red will work.

11 I'd like to move down to -- well, strike.

12 Just one last thing. Does Newegg somehow
13 control or direct the user to come to Newegg's website?

14 A No, they don't.

15 Q I'd like to now move on to 34(f).

16 Said buyer computer being programmed to
17 receive a plurality of requests from a user to add a
18 plurality of respective products to a shopping cart in
19 said shopping cart database.

20 First, who sends the request: Newegg or the
21 customer?

22 A The customer does.

23 Q And, again, this claim is very -- this claim
24 language is very important.

25 I want to talk about right here, shopping cart

1 in said shopping cart database. What is the
2 significance of that language?

3 A The significance of that language is that the
4 shopping cart information is stored in a shopping cart
5 database.

6 Q Meaning that the shopping cart has to be in
7 the shopping cart database at this time?

8 A That's the way I read the language, yes.

9 Q Likewise, what is the significance of the word
10 respective?

11 A Well, if we think of a sentence that uses the
12 word respective or respectively, it might say something
13 like I gave my wife and my sister a ring and a pendant
14 respectively. That means you gave your wife a ring and
15 your sister a pendant.

16 So when I see that word respective showing up
17 in the language, what it says to me is that as each item
18 is added to the shopping cart, a corresponding change or
19 addition is made to the shopping cart database.

20 Q So does Newegg -- I'm sorry.

21 In the Newegg system, does the user add a
22 plurality -- either a plurality of requests from the
23 user to add a plurality of respective products to a
24 shopping cart in said shopping cart database?

25 A Yes. If the user decides to buy more than one

1 item, that satisfies the needs for the plurality. And
2 what happens is, as each item gets added, the
3 add-to-cart button gets hit on the catalog page, and
4 through a back and forth with the server, the
5 client-side cookie gets updated to incorporate the
6 contents that's just been added.

7 Q So when that's being added, are those requests
8 to add the plurality of respective products, are they
9 going to a shopping cart while it's in the shopping cart
10 database?

11 A No. They're going to a cookie that's on the
12 customer computer.

13 Q Now, we've been talking all week about the
14 difference between the server-side shopping cart that is
15 disclosed and claimed in the patent and the client-side
16 or back-and-forth methodology that Dr. Stewart testified
17 to yesterday.

18 Is this language significant with respect to
19 that difference?

20 A Yes, it is.

21 Q I would like to talk about this limitation in
22 the context of a demonstrative that we've put together.

23 A Okay.

24 Q If you could first explain to the jury what
25 we're seeing here.

1 A What you see on this display on the right-hand
2 side of the screen is a picture of the customer
3 computer. And you'll notice that off to the right, in
4 the box at the bottom, we've cleverly put a chocolate
5 chip cookie behind a table of items.

6 And what we're about to do is to add some
7 stuff to a shopping cart and show you how it winds up
8 inside that cookie.

9 Q Okay. So let's -- let's do this. So the
10 customer hits add-to-cart --

11 A Right.

12 Q -- which I'm going to do. What else?

13 A So when the customer hits the add-to-cart
14 button, a message goes through the worldwide web to the
15 server.

16 And the server uses something called the set
17 cookie command in its return page to the client, and
18 then the item and the quantity for the shopping cart
19 contents gets updated.

20 So we see one camera shows up in the cookie.

21 Q Is the Newegg shopping cart in the shopping
22 cart database when it receives this request to add this
23 product?

24 A No. You'll notice that our little red ball
25 bounces back strictly between the client and the web

1 server, and we don't go to the shopping cart database,
2 at least not yet.

3 Q Which is the one that's above on --

4 A That's the one on top at the left, yes, that's
5 correct.

6 Q Okay. So let's go ahead. The customer
7 decides he wants to buy something else. Here goes.

8 Add-to-cart again.

9 A Okay. So we hit add-to-cart, goes through the
10 web, hits the server, server creates a set cookie
11 request, and bingo, when it gets back to the client, we
12 add one battery to our cookie.

13 Q Okay. So now a plurality of products have
14 been added to the shopping cart, correct?

15 A Yes, that's correct.

16 Q But have they been added to the shopping cart
17 while it's in the shopping cart database?

18 A No. As you can see from our demonstrative, no
19 action has touched the shopping cart database just yet.

20 Q Okay. One more time.

21 A Okay.

22 Q You've got a camera. You've got a battery.

23 A That's right. We need a memory card now.

24 Q Okay.

25 A So let's go ahead and push the button.

1 Q Here we go.

2 A Send a message to the web server. It sends a
3 set cookie request that adds a memory card to our
4 collection of items for our digital camera, and now our
5 cookie is stuffed with three pieces of merchandise.

6 Q Okay. So now we've placed three separate
7 items in the shopping cart, correct?

8 A Yes, that's correct.

9 Q At any time has that shopping cart been in the
10 shopping cart database?

11 A No, it has not yet hit the shopping cart
12 database.

13 Q Okay. So now, when does it go to the shopping
14 cart database?

15 A When we hit the checkout button and stop
16 shopping, that's the point at which a message leaves the
17 client, goes to the web server, and then finally goes up
18 into the shopping cart database.

19 Q Now, to be clear, is a request to check out a
20 request to add products to the shopping cart?

21 A No, sir.

22 Q Okay. So let's show what happens.

23 A Okay. When we click add -- I'm sorry -- when
24 we click checkout --

25 Q Checkout.

1 A -- the red ball goes through the web, hits the
2 server. The server sees it's a checkout request, so it
3 grabs the contents of the cookie, and it pushes them
4 into the shopping cart database.

5 Q One time.

6 A Exactly. One time.

7 Q Now, this is the Newegg cookie-side
8 methodology, correct?

9 A Yes, it is.

10 Q I would now like, using another demonstrative,
11 to contrast this with the server-side system that is
12 claimed in the '314 patent.

13 A Okay.

14 MR. GIANNETTI: I object, Your Honor.
15 Characterizing the claims, and I don't think he should
16 be doing that.

17 THE COURT: Restate your question.

18 MR. BALDAUF: We can just move on to the
19 exhibit.

20 THE COURT: All right.

21 Q (By Mr. Baldauf) Mr. Tittel, what do we have
22 before us?

23 A What we have here is a server-side database
24 system, which means that when a shopper adds an item to
25 a cart, a message goes from the web browser through the

1 and the server-side model?

2 A Yes. The Newegg method uses a shopping cart
3 in a conventional sense in that you go to the grocery
4 store, your cart is in your hand, head to the produce
5 section, drop in a head of lettuce, head to the canned
6 goods, grab a can of beans, drop it in the cart, head to
7 the dairy section, grab a quart of milk, drop it in,
8 roll it up on the register, pay, and go out.

9 On the other hand, the server side is more
10 like there is no shopping cart, and you go grab the
11 lettuce, and you walk it to the conveyor belt at the
12 cash register, and then you walk from there back into
13 the canned goods section, grab the can of beans, bring
14 it to the conveyor belt, and then finally to the dairy
15 section, grab your milk, bring it to the conveyor belt.

16 Then you can check out with the clerk and pay
17 for your merchandise.

18 Q Why does Newegg use this cookie methodology as
19 opposed to the server-side database system?

20 A There are two very important reasons why
21 Newegg chose this implementation. And we heard Mr. Wu
22 talk about this to some extent yesterday.

23 One of those reasons is that updating a cookie
24 involves only two machines, right?

25 When we saw the demonstrative, the information

1 goes from the client to the web server, and then the web
2 server uses a set cookie command to send the shopping
3 cart contents back to the client.

4 Only two machines involved. A lot faster.
5 The data that's involved is simple text data that's very
6 quick to move and very quick to write.

7 On the other hand, the server-side model
8 actually involves three machines, and it also turns out
9 that doing things to databases requires a lot more
10 instructions and a lot more processing power and time
11 than writing entries into a text file. That's the way
12 that computers work.

13 The other reason is that in testimony we've
14 heard here in the trial, only 6 to 8 percent of shopping
15 carts that get started on the Newegg website actually
16 end up going to checkout.

17 In earlier conversations with Mr. Wu, he had
18 told me it was 1 out of every 20. So that either
19 translates into 1 out of 6, to 1 out of 12, or even as
20 many as 1 out of 20. All of those other shopping carts
21 never go to the cash register.

22 So if you use a database model, you're looking
23 at a tremendous volume of machine time, network traffic,
24 and storage space to accommodate all of that
25 information.

1 And when -- you know, we saw from those
2 numbers that right now Newegg is handling a million
3 completed transactions a month. Well, if those ratios
4 that I just explained are true, that means we're looking
5 at somewhere between 6, 12, or maybe even 20 million
6 shopping carts that never turn into anything.

7 Why would you want to put that kind of
8 information in the database somewhere? It just doesn't
9 make sense.

10 Q Are there likewise disadvantages to using the
11 Newegg cookie system as opposed to the server-side
12 model?

13 A Well, first and foremost, if you want to shop
14 on the Newegg site, you have to turn the cookies on. It
15 won't work otherwise.

16 And as we heard Mr. Stewart --

17 Q Please go ahead. I'm sorry.

18 A As we heard Mr. Stewart say in his deposition
19 yesterday, for security reasons, people do turn shopping
20 carts off -- I'm sorry -- cookies off. I beg your
21 pardon.

22 The other reason is that if I shop at home, my
23 shopping cart stays with my web browser. In fact, if I
24 open Internet Explorer and Firefox on my machine, if I
25 start shopping on Firefox, I can't access that same

1 information in Internet Explorer because the cookie
2 stays with the browser.

3 Q In the server-side model, could you shop from
4 multiple computers?

5 A As long as you were able to reestablish the
6 same session that you started and grab the contents of
7 its associated shopping cart, yes, you could.

8 Q With respect to this issue of cookies, if the
9 user disables cookies, is there anything that Newegg can
10 do about it to enable them?

11 A No. No. Newegg can't reach into the
12 customer's -- customer's machine and change that
13 setting.

14 Q Will the server-side database system work if
15 cookies are disabled?

16 A The server-side database works just fine if
17 cookies are disabled.

18 Q Is the Newegg cookie method equivalent to the
19 server-side method, meaning does it work in the same way
20 and get the same result?

21 MR. GIANNETTI: I object, Your Honor.
22 This is outside the scope of his report.

23 THE COURT: Restate your question.

24 MR. BALDAUF: I think we made the point.
25 I'm not sure I heard the objection, but we can move on.

1 A No, they don't.

2 Q I'd like to talk about 34(h). Specifically,
3 this language: Said shopping cart computer being
4 programmed to receive said plurality of shopping cart
5 messages to modify shopping cart in said shopping cart
6 database?

7 Why is that language significant to this
8 claim?

9 A Because it says that when the contents of the
10 shopping cart change, the contents of the database
11 change.

12 Q Using these two side-by-side slides, can you
13 explain to us what you mean by modifying said shopping
14 cart in said shopping cart database?

15 A Well, if we look at the top of the slide,
16 which represents the Newegg system, what we see is that
17 as items get added to the cart, it's the cookie on the
18 customer computer that changes and that no interaction
19 with the shopping cart database is involved.

20 On the other hand, if we look at the
21 server-side implementation at the bottom of the slide,
22 each time an item is added to the shopping cart, a
23 corresponding change is made to the contents of the
24 shopping cart record in that shopping cart database.

25 Q So does Newegg satisfy the limitation of said

1 shopping cart computer being programmed to receive said
2 plurality of shopping cart messages to modify shopping
3 cart in said shopping cart database?

4 A No, it does not.

5 MR. BALDAUF: I'm afraid to touch this
6 thing now.

7 MR. SATINE: Mr. Sayles will fix it.

8 Q (By Mr. Baldauf) Were you here for Mr. Grimes'
9 testimony?

10 A Yes.

11 Q Did you hear when he testified that the
12 assignment of a shopping cart ID creates an instance of
13 a shopping cart in the Newegg shopping cart database
14 that is then modified?

15 A Yes, I did.

16 Q Have you also heard the assertions from
17 Soverain that going from no record to a record in a
18 database constitutes modification of the shopping cart
19 in the shopping cart database?

20 A Yes, I have.

21 Q Do you agree with either of these assertions?

22 A No, I don't, and I'll tell you why.

23 Q Please look at the demonstrative and explain
24 why.

25 A Okay. Let's take a look at the demonstrative

1 that's up on the screen. When we get to that point in
2 the checkout process -- if you'll remember, when we go
3 from the web server up to the database server at the
4 very end, what happens in the code is that an integer
5 counter or just a number gets read from a variable, and
6 that number is the shopping cart ID.

7 Q Okay. Stop there.

8 A I'm sorry?

9 Q Stop right there.

10 Is there any empty field, anything associated
11 with that number that can be changed, modified, or
12 otherwise?

13 A No. It's just a counter, and it has nothing
14 to do with the database either.

15 On the other side of the diagram, going to the
16 right, we see the contents of the cookie moving into a
17 variable so that all the data can be combined.

18 So what happens is, we get a number on the
19 left, which is our shopping cart ID, and we get data on
20 the right, which is our shopping contents, and all of
21 that information, in a single SQL command, gets dropped
22 into the database in one fall swoop.

23 In database terminology, modify means to
24 change an existing record. And, in fact, if you look at
25 the claim construction, the definition of modify, as

1 applied to the shopping cart in the shopping cart
2 database, reads: To change an instance of a shopping
3 cart in a shopping cart database.

4 Creation in database terms is not change.
5 It's what's called instantiation, because you go from
6 something -- I'm sorry -- from nothing to something.

7 So it's not a modification. Modification
8 means changing something that's already there.

9 Q Does Newegg satisfy each and every element of
10 the asserted claims of this patent?

11 A No, it does not.

12 Q Okay. I'd now like to turn to the '492,
13 specifically Claim 17, briefly.

14 MR. BALDAUF: Be careful with that, Dan.
15 No. I'm sorry, Dan. Claim 17 first. Yes.

16 Oh, well, that's all right, because we
17 weren't going to say much about it anyway.

18 Q (By Mr. Baldauf) As Dr. Grimes testified, do
19 you agree that Claim 17 is virtually identical to
20 Claim 34 that we just discussed?

21 A With a few minor differences, yes.

22 Q I'd like to just talk about this very, very
23 quickly.

24 With respect to a couple of the limitations
25 that we just discussed in Claim 34, at least one buyer

1 computer for operation by a user desiring to buy
2 products, the buyer computer being programmed to receive
3 a plurality of requests from a user to add a plurality
4 of products to a shopping cart in said shopping cart
5 database, and then the shopping cart computer being
6 programmed to receive a plurality of shopping cart
7 messages to modify the shopping cart in the shopping
8 cart database, for the reasons that you just explained,
9 with respect to Claim 4 -- 34, does Newegg satisfy those
10 limitations for Claim 17 of the '492 patent?

11 A No, they don't.

12 Q Now let's talk about this one.

13 A Okay.

14 Q Sovereign also asserts Claims 41 and 61 of the
15 '492 patent. Again, these depend upon Claim 15, so I
16 would just like to talk about Claim 15.

17 Again, we have the same limitation. Once
18 again, a client computer for operation by a client user.

19 And does Newegg supply the client computer and
20 client user?

21 A No, it doesn't.

22 Q Does Newegg somehow direct or control the
23 client to come to its website and shop?

24 A No. Shopping remains a free-will experience.

25 Q I would now like to talk about programming. I

1 told you before I didn't want to talk about programming.

2 This is what I want to talk about.

3 A Okay.

4 Q 15(f): The client computer being programmed
5 to display the statement document to receive a request
6 from the client user to display transaction details and
7 so forth.

8 Does Newegg program the client computer to
9 display the state in the document?

10 A No, it doesn't.

11 Q How is the client computer programmed?

12 A The client computer receives an html document
13 that it includes information about what the display is
14 on the screen and how to display it.

15 As you notice -- whoops, I knocked out
16 the screen. Sorry.

17 Q Let's start -- let's back up just one second
18 before --

19 A Okay.

20 Q I want to talk about programming in two
21 sentences -- I'm sorry -- in two sentences.

22 First, I want to talk about the browser on the
23 client computer. Who programs or puts the browser on
24 the client computer?

25 A Browsers come from software development

1 companies, like Microsoft with Internet Explorer, the
2 Mozilla Foundation for Firefox, Opera Software for
3 Opera, and so on and so forth.

4 Q Does Newegg do that? Do they program and put
5 those browsers on the customers' computers?

6 A No, they don't.

7 Q Now, sitting here throughout the week, have
8 you heard testimony that Soverain suggests that when
9 Newegg server sends html pages to the customer's browser
10 that this constitutes programming?

11 A Yes, I have.

12 Q Will the customer's browser display Newegg's
13 page without the instructions sent on these html pages?

14 A No, it can't.

15 Q But does that have any issue -- or any bearing
16 on the issue of programming?

17 A No, not really.

18 Q Is it fair to say that you know a little bit
19 about html?

20 A Yes, that's a fair statement.

21 Q And this is one of those instances where we
22 could say you wrote the book.

23 A That's right.

24 Q Let me give you the book.

25 A Okay. Thanks.

1 You'll notice that the cover -- cover of this
2 book says HTML. Html stands for hypertext markup
3 language.

4 A markup language is a language that's
5 designed to handle text and to do things with text and
6 to interact with other kinds of computing facilities.

7 A programming language is a general-purpose
8 software development tool that can be used to create any
9 kind of program.

10 In other words, what you can do with a markup
11 language is pretty limited. You can't use it to do
12 mathematical calculation. You can't use it to influence
13 logic or decisions. You can't use it to create
14 general-purpose programs.

15 What html does, it does very well, but by
16 consensus with the computer science field, a markup
17 language is not a programming language.

18 And that's the basis for my belief that this
19 is not programming. This is document handling and
20 document processing.

21 And html files are called html documents.
22 They're not called html programs. That's the common
23 practice in the industry, and it's been that way ever
24 since html came on the scene in 1991.

25 Q So does Newegg client -- does Newegg program

1 the client computer and display the statement document
2 to receive a request from the client user to display
3 transaction details corresponding to a portion of the
4 statement document displayed by the client computer and
5 to cause a transaction detail hypertext link
6 corresponding to the portion of the statement document
7 to be activated?

8 A No.

9 Q So does Newegg satisfy all the limitations of
10 the asserted claims of this patent?

11 A No, it does not.

12 Q I'd now like to turn to the '639 patent.

13 A Okay.

14 Q Do you understand that this is referred to as
15 the session ID patent?

16 A Yes, I do.

17 Q In general, how does the basic inherent
18 function of the internet relate to session IDs?

19 A If by the internet, you mean the worldwide
20 web --

21 Q Sorry. I did.

22 A -- session mechanisms are necessary to
23 establish ongoing communications between a pair of
24 communicators, usually, a client and a server.

25 Q Let's take a look at this. You see the ball

1 there, the device checks the address and looks at it and
2 says, hey, I can't do this here locally; I got to pass
3 it on to somebody else who can -- who might be able to
4 handle it himself.

5 And so there's a whole bunch of intermediate
6 steps called forwards involved between getting from the
7 client to the server.

8 Q Does Newegg forward the service request from
9 the client to the server system?

10 A No. Newegg does not forward that information.

11 And that's, again, inherent to the way that
12 the internet works.

13 Q The claim then requires the client storing the
14 session identifier for use in subsequent distinct
15 requests to the server system.

16 Now, this limitation is also in Claim 78.
17 What does it mean for the client to store the session
18 identifier?

19 A When you set up a session or you log on to a
20 server what usually happens is, you're going to give it
21 an account and a password or some other kind of
22 credentials to prove who you are, and then if the server
23 likes what it sees, it's going to say, okay, you can do
24 something with me.

25 And part of the message that it sends back

1 that tells you it's okay for you to do something with it
2 is a special identifier that's built so that it's hard
3 to fake out and hard to forge, and it becomes a part of
4 what the client uses afterwards to communicate back with
5 the server.

6 The reason why this happens is because it
7 takes some time to look up a password and to check an
8 account name and to figure out what that account is
9 allowed to do and so on and so forth.

10 And if you had to do it every time you sent a
11 message between a client and a server, it would put lots
12 of unnecessary overhead on that communication.

13 So the shortcut that gets used in a lot of
14 different systems is that once you establish your
15 credentials, which is called authentication, then you
16 get some kind of token or identifier back from the
17 server that you can use to communicate so that you don't
18 have to go through all that hoopla every time you go
19 back and forth.

20 Q Who performs this step of storing the session
21 identifier?

22 A The customer computer stores the session
23 identifier and then uses it in subsequent
24 communications.

25 Q Does Newegg control or direct the customer and

1 his or her computer to store the session identifier?

2 A No. That's a basic behavior of how the web
3 works.

4 Q Moving on. Appending the stored session
5 identifier to each of the subsequent distinct requests
6 from the client server system.

7 What does this mean?

8 A This is what I referred to earlier as the
9 shortcut that the client uses to say, hey, you know me;
10 I'm okay, and to be able to gain access not just to the
11 server but also to whatever kind of ongoing interaction
12 it has with the server.

13 Q Who performs this step?

14 A The client does.

15 Q And does Newegg control or direct the client
16 to do so?

17 A No. Again, it's inherent to the way that the
18 web works.

19 Q Does Newegg satisfy every limitation of the
20 asserted claims in the '639 patent?

21 A No, it does not.

22 Q Now, next we're going to move on to start
23 talking about invalidity, but I want to ask you one last
24 thing.

25 Now, we've been talking about cookies all

1 an outline that says what you're going to write about,
2 and then it has something called a competitive analysis.

3 And a competitive analysis means you go out
4 and look up all the other books on that subject, and you
5 look at them, and read as much of them as you can, and
6 you provide a summary of what those books cover. And
7 then you explain why your book is going to be better
8 than their book and it's going to say something that
9 their book doesn't say, and ya-da, ya-da, ya-da.

10 Q I would first like to discuss the '314 patent,
11 but in doing so, we're going to talk about a few
12 CompuServe books first.

13 Before we get started, do you know when the
14 application for the '314 patent was filed?

15 A In October of 1994.

16 Q First, I'd like to talk about a book that
17 Mr. Trevor talked about yesterday, Defendants' Exhibit
18 2, How to Get the Most Out of CompuServe.

19 Do you know when this book was published, sir?

20 A Yes, it was published in 1989.

21 Q Prior to the filing date of the '314 patent?

22 A Yes, that's correct.

23 Q Are you familiar with this book?

24 A Yes, I am. I used it -- when I went to work
25 at Novell, because they didn't have that many people

1 that knew TCP/IP, I became what was called a sysop on
2 CompuServe. That stands for system operator. Sounds
3 fancy, but it means you're a babysitter. You have to
4 keep all the unruly forum participants in line, and then
5 you have to answer all the questions that nobody else
6 wants to answer. So it kept me up nights.

7 But, anyway, at that time I obtained a copy of
8 the Bowen and Peyton book and used it as a reference
9 while I was trying to become as proficient with
10 CompuServe as possible.

11 Q I would next like to show you Defendants'
12 Exhibit 4, which was likewise discussed by Mr. Trevor
13 yesterday, Using CompuServe by Ellsworth and Ellsworth.

14 Do you know when this book was published?

15 A Yes, this book was published in March of 1994.

16 Q I think it was actually April.

17 A Maybe April. That's true, yeah. It was
18 somewhere in that neighborhood.

19 Q Is this prior to the filing date of the '314
20 patent?

21 A Yes, it is.

22 Q Are you familiar with this book?

23 A This book was, by and large, considered the
24 Bible for CompuServe at the time. The Ellsworths had
25 the reputation of having the best reference on

1 CompuServe around. So this was the one that we paid the
2 most attention to in our competitive analysis.

3 Q Next I would like to show you what is being
4 marked as Defendants' Exhibit 3, CompuServe CIM Running
5 Start by Bob Campbell.

6 Do you know whether this book was published,
7 sir?

8 A According to the copyright page, this book was
9 published in 1993.

10 Q Again, prior to the filing of the '314 patent?

11 A Yes.

12 Q Now you heard Mr. Trevor testify yesterday
13 that these books were not written for programmers. Do
14 you agree with that?

15 A Yes, I do agree with that. These books were
16 aimed at end users to show them how to use CompuServe,
17 to teach them what CompuServe could do, to explain and
18 illustrate lots of different services and capabilities
19 that CompuServe could provide, and in general to help
20 them become better CompuServe users.

21 Q However, would someone skilled in the art of
22 computer programming understand how to create the
23 described functionality in these books based upon
24 disclosure?

25 MR. GIANNETTI: I object, Your Honor. No

1 basis for this opinion.

2 THE COURT: Restate the question and lay
3 a predicate.

4 Q (By Mr. Baldauf) Mr. Tittel, based upon your
5 long experience in the industries, the hundreds of books
6 that you have written, do you believe that you have the
7 ability to explain to us whether one of ordinary skill
8 in the art would understand how to program something
9 based upon a disclosure in a book as to what the end
10 functionality is?

11 A I do.

12 Q Based upon that understanding, would someone
13 reading the disclosure in these books understand how to
14 implement that functionality?

15 MR. GIANNETTI: I object. There's no
16 foundation for this opinion, Your Honor.

17 THE COURT: Overruled.

18 A In general, if you know how to write software
19 and you read about or see how a software system works,
20 you can figure out what's going on underneath the hood.

21 If you see menus being used -- menus are
22 things that programmers know how to create and how to
23 manipulate. If you see data being manipulated, if you
24 understand the kind of manipulation that's involved, you
25 can write code to perform that manipulation.

1 This generally is a technique known as reverse
2 engineering, and software developers do it everyday to
3 figure out how to build programs or how to take
4 functionality that they like that they see in somebody
5 else's program and add it to their program.

6 I don't know if y'all are old enough to
7 remember back when --

8 MR. GIANNETTI: Your Honor, this is a
9 narrative.

10 THE COURT: Sustained.

11 Q (By Mr. Baldauf) Okay. We can move on.

12 A Excuse me.

13 Q (By Mr. Baldauf) I would like to show you Page
14 321 of the Using of CompuServe book. I'm sorry, 221 of
15 How to Get the Most Out of CompuServe.

16 A Could you please --

17 A Which exhibit is that one?

18 Q How to Get the Most Out of CompuServe is
19 Defendants' Exhibit 2, but it's on the screen right in
20 front of you.

21 A Okay.

22 Q Could you please read the bottom portion of
23 this page that's displayed, and then explain to us what
24 it means.

25 A Yes. Let's start with: Here is the rundown

1 on ordering, which refers to how to order something on
2 CompuServe.

3 You browse through a single store's database,
4 ordering as many things as you like with the O command.
5 That means when you find something you like, you select
6 it, and then you hit the O key to tell the server that
7 you want to put it in your personal holding file.

8 As you exit the store, you are taken to an
9 order area, which is the electronic version of a
10 checkout clerk with a cash register, where you are asked
11 *for information such as name, address, phone number, and*
12 *your method of payment, which often is a credit card*
13 *number but can vary depending on the merchant with which*
14 *you are dealing.*

15 There are stopping places all along the way to
16 make corrections to the ordering information and even to
17 cancel the entire order. In other words, the O command
18 isn't a final commitment, so a slip of the fingers won't
19 get you into trouble.

20 Q Could a customer purchase multiple items from
21 a merchant in the CompuServe Mall based upon this
22 disclosure?

23 A Yes, they could.

24 Q In the interest of time -- we were going to
25 talk about the same language that appears in the

1 Campbell book, but I would like the move this along a
2 little bit.

3 Turning to the Ellsworth and Ellsworth book,
4 Using CompuServe, there are a number of pages here that
5 Mr. Trevor talked about yesterday, but --


6 MR. BALDAUF: Mr. Brean, if we can just
7 go to Page 376.

8 Q (By Mr. Baldauf) I am going to move through
9 these quickly so we could speed this up a little bit.

10 A Okay.

11 Q Could you please read these portions from 376
12 of the Ellsworth and Ellsworth book to us?

13 A Certainly.

14 The order command functions the same way for
15 each store, but merchants may vary in payment and
16 delivery options. Some merchants also offer extended
17 warranty options. Again, pay attention to these
18 options. When you find a product that you want to buy,
19 press O for order. Your order will be stored in a
20  personal holding file until you leave that merchant's
21 store.

22 Next paragraph: Press R to continue browsing
23 the store in which you just placed the order. You can
24 place as many orders in the store as you want. When you
25 are finished shopping in that store, type checkout. An

1 electronic order form appears.

2 Q I'd like to focus your attention specifically
3 on the underlying language: Your order will be stored
4 in a personal holding file until you leave the
5 merchant's store.

6 Using the Court's construction, is the
7 personal holding file a shopping cart in a shopping cart
8 database?

9 A Yes, it is a shopping cart in a shopping cart
10 database.

11 The personal holding file itself is a shopping
12 cart. And because CompuServe supported multiple
13 individuals shopping in the same store at the same time,
14 a collection of such files would be maintained, and that
15 would meet the Court's requirements for a shopping cart
16 database.

17 Q I would now like to discuss how the teachings
18 of the CompuServe Mall in these references match up with
19 the claims.

20 First of all, a network-based sales system.
21 The Using CompuServe book describes the use of WINCIM to
22 connect the computers. What does this explain to us
23 about CompuServe being a network-based sales system?

24 A Well, the existence of sophisticated
25 communication software designed to work with the

1 CompuServe information service indicates there was a
2 communications client that the PC or a buyer computer
3 could use to communicate with the CompuServe servers
4 back in Columbus, Ohio.

5 And we know from Mr. Trevor's testimony
6 yesterday, that there was actually a pretty complicated
7 network in between the local points of presence, where
8 your modem line might go, and the 40-plus Digital
9 Equipment minicomputers back in Columbus, Ohio.

10 Q But does this text of Using CompuServe
11 disclose the limitation of a network-based sales system?

12 A Yes.

13 Q Next: At least one buyer computer for
14 operation by a user desiring to buy products.

15 Again, looking at the same language, what does
16 this tell us about the existence of the buyer computer?

17 A Well, we see the name of a specific client.
18 It's a piece of software called WINCIM, although, again,
19 as we heard from Mr. Trevor yesterday, CompuServe had
20 lots of different clients for various platforms that you
21 could use to log into CompuServe and go shopping in the
22 CompuServe Mall.

23 Q And the Bowen and Peyton, I think this one
24 maybe is a little bit even more clear: Turn on your
25 computer and run your communications program.

1 Again, do these references teach the existence
2 of a buyer computer for operation by a user desiring to
3 buy products?

4 A Absolutely.

5 Q At least one shopping cart computer.

6 What does this language in using CompuServe
7 tell us about the existence of a shopping cart computer?

8 A Well, the architecture of CompuServe was such
9 that no information was stored on the client except
10 perhaps as related to how screens looked and what kind
11 of buttons there were and that sort of thing.

12 Any information about products, product
13 selection, purchase, whatever, would be sent in a
14 message from the client to the server. And, in fact,
15 the personal holding file is on the server, and that's
16 where we find our shopping cart computer.

17 Q And specifically then, moving down to How to
18 Get the Most Out of CompuServe, it talks about the
19 existence of 40 Digital Equipment Corporation
20 microcomputers.

21 Did you ever visit that site?

22 A Yes, I did.

23 Q What do these references on -- do these
24 references teach the existence of a shopping cart
25 computer?

1 A Yes, they do.

2 Q In a shopping cart database connected to said
3 shopping cart computer.

4 Going back to the Using CompuServe book, what
5 does this explain to us about a shopping cart database
6 connected to said shopping cart computer?

7 A Well, because we know there was a personal
8 holding file for each individual user who was active in
9 a merchant's store, and that multiple users could be
10 active in any individual store at anytime, there would
11 be multiple personal holding files where those personal
12 holding files represent -- each represents a shopping
13 cart, and the collection of personal holding files
14 represents a shopping cart database.

15 Q Is this confirmed in How to Get the Most Out
16 of CompuServe book?

17 A Yes, it is.

18 Q Do these books disclose a shopping cart
19 database connected to said shopping cart computer?

20 A Yes, they do.

21 Q Said buyer computer and said shopping cart
22 computer being interconnected by a computer network.
23 I doubt this is very, very controversial, but does the
24 Using CompuServe book disclose the interconnection by a
25 computer network?

1 A Absolutely. Not only did CompuServe operate
2 its own networks, but it also interoperated with other
3 networks as well.

4 Q These networks there such as TimeNet, Telenet,
5 DATAPAC, et cetera?

6 A Sprintnet, yes, numbers of others.

7 Q Do these books disclose the limitation of said
8 buyer computer and said shopping cart computer being
9 interconnected by a computer network?

10 A Yes, they do.

11 Q Okay. I was dreading these, they are so long.
12 Said buyer computer being programmed to receive a
13 plurality of requests from a user to add a plurality of
14 respective products to a shopping cart in said shopping
15 cart database, and, in response to said requests to add
16 said products, to send a plurality of respective
17 shopping cart messages to said shopping cart computer,
18 each of which comprises a product identifier identifying
19 one of said plurality of products.

20 Could you please first explain to us what that
21 means in simpler terms?

22 A Yes. That means that you can pick a product
23 and put it in your shopping cart, and, in fact, that you
24 can pick more than one product and put it in the same
25 shopping cart.

1 Q Is this disclosed in the Using CompuServe
2 book?

3 A The CompuServe Mall supported numerous stores.
4 And inside each store, users could order one or more
5 products, in fact, as many as they -- like Mr. Trevor
6 said yesterday, they might have been limited to 40, but
7 that's enough for me on most grocery store trips even.

8 Q Is this also confirmed in How to Get the Most
9 Out of CompuServe?

10 A Yes.

11 Q Now, you explained to us that Newegg does not
12 add a plurality of respective products in a shopping
13 cart in said shopping cart database, that this takes
14 place on the customer's computer. How do we know where
15 this happens in the CompuServe Mall?

16 A Well, again, the CompuServe environment was
17 one where the client could make selections and choose
18 things, but each such selection results in a message
19 going from the client to the server where that
20 information is stored.

21 So the only way that the personal holding file
22 could be updated each time an item was selected and the
23 O key was hit to order that item would be by adding to
24 the personal holding file for each such selection.

25 Q Are the limitations of this claim taught or

1 obvious to one reading these books?

2 A Yes, they are.

3 MR. GIANNETTI: I object, Your Honor.

4 This sounds like an opinion about the evidence --

5 THE COURT: I'm sorry. What?

6 MR. GIANNETTI: Sounded like an opinion
7 of obviousness. He's expressing opinions of
8 obviousness, and that's not what he's here to do, and
9 it's not in his report.

10 MR. BALDAUF: I beg to differ
11 Mr. Giannetti. We certainly offered these references
12 under both 102 and 103.

13 MR. GIANNETTI: The issue is whether this
14 witness has expressed any opinions in his report. He
15 said specifically when he came to speak to us today he
16 was not going to express he legal opinions. He's
17 expressing an opinion of obviousness, and it's not
18 covered by his report.

19 MR. BALDAUF: I disagree. His report
20 included the contentions. But I can change the
21 terminology if it makes it easier for everybody.

22 THE COURT: All right. Repeat your
23 question.

24 The jury will disregard the last question
25 and answer.

1 Q (By Mr. Baldauf) Mr. Tittel, based upon the
2 teachings of the Using CompuServe book and How to Get
3 the Most Out of CompuServe book, are these limitations
4 taught or apparent based upon these teachings?

5 A Yes.

6 Q Got ahead of myself.

7 Said shopping cart computer being programmed
8 to receive said plurality of shopping cart messages, to
9 modify said shopping cart in said shopping cart
10 database, to reflect said plurality of requests, to add
11 said plurality of products to said shopping cart, and to
12 cause a payment message associated with said shopping
13 cart to be created.

14 What do these references tell us -- sorry.

15 Before I do that, what does this limitation
16 mean?

17 A It means that as you shop, you can pick items,
18 in fact, multiple items, and then when you're ready to
19 stop shopping and start checking out, you can so
20 indicate and be informed as to what is in your shopping
21 cart and what you're going to have to pay for it.

22 Q Do these books explain that the shopping cart
23 was modified in the shopping cart database?

24 MR. GIANNETTI: I --

25 A Yes, they do.

1 Q (By Mr. Baldauf) Does this passage likewise
2 describe a payment message?

3 A The top passage on the page mentions an
4 electronic order form. This is the first step in a
5 payment message. It basically is the point at which
6 you're told what it is that you bought and how much
7 you're going to have to pay.

8 When we saw the movie -- or rather the
9 demonstration yesterday from Mr. Trevor, this was the
10 point at which the selection of items that had been
11 picked showed up, and then we had the option to add,
12 delete, or quit.

13 Q Are the limitations of this clause set forth
14 in the CompuServe books?

15 A Yes, they are.

16 Q Next limitation: Said buyer computer being
17 programmed to receive a request from said user to
18 purchase said plurality of products added to said
19 shopping cart and to cause said payment message to be
20 activated to initiate a payment transaction for said
21 plurality of products added to said shopping cart.

22 A This is the point --

23 Q Sorry. I got ahead of myself. There we go.

24 Okay.

25 A This is the point at which you type checkout

1 and you indicate that you're done with the shopping part
2 and you're ready to start with am I going to actually to
3 buy this and pay for it part. And that's the point at
4 which you get a message that tells you what it is that
5 you have put into your shopping cart and are told how
6 much it's going to cost you to take that stuff and make
7 it yours.

8 Q Again, reading on in Using CompuServe, what
9 does this explain to us?

10 A Well, it tells us that in order to pay for
11 merchandise, we have to identify ourselves so that not
12 only can the merchant come back later and say you are
13 the person who bought this stuff, but also so that they
14 know where to send it.

15 Q Now, is the activation of the payment message
16 simply whatever message is sent to CompuServe computers
17 from the buyer computer until the customer exits the
18 store?

19 A The payment message occurs at the end of the
20 transaction when the buyer confirms the purchase and
21 essentially authorizes a transfer of funds.

22 Q Does Ellsworth disclose that checkout
23 initiates an order completion process during which the
24 shopper can indicate the order is correct?

25 A Yes, that's true.

1 Q Did the CompuServe Mall display a screen after
2 checkout summarizing the customer's payment selections?

3 A Yes, it did.

4 Q Was this screen shot sent from the CompuServe
5 servers?

6 A Yes, it was.

7 Q Was this screen created by the server before
8 it was displayed?

9 A Of course it was.

10 Q After it was displayed, could it be accepted
11 or activated?

12 A Yes.

13 Q Are the limitations of this clause set forth
14 in the Using CompuServe book?

15 A They are met, yes.

16 Q The final limitation: Said shopping cart
17 being a stored representation of a collection of
18 products, said shopping cart database being a database
19 of stored representations of collections of products,
20 and said shopping cart computer being a computer that
21 modifies said stored representations of collections of
22 products in said database.

23 Do you agree with Dr. Grimes that this clause
24 just contains definitions?

25 A Yes. And I believe we've already explained

1 how, by adding items to the personal holding file from
2 the client to the server, we've been involved in using
3 all of these definitions.

4 Q Do these CompuServe books set forth these
5 limitations of this final claim clause?

6 A Yes, they do.

7 Q I would ask you one final question.

8 Mr. Trevor talked yesterday about the
9 internet. Did CompuServe work over the internet?

10 A Well, yes, in a manner of speaking they did by
11 their support for Telenet.

12 But the language of the word internet is
13 pretty interesting in that if you refer to the internet,
14 you're talking about the TCP/IP interconnected global
15 collection of computers that we all know and love. But
16 if you talk about an internet, you're just talking about
17 a network of networks.

18 And I think in the other things that we've
19 looked at in the CompuServe writings, the CompuServe
20 Network definitely interfaced with other networks and,
21 therefore, also meets the definition of an internet.

22 Q Are the asserted claims of the '314 patent
23 shown or apparent based upon the teachings in these
24 books about the CompuServe Mall?

25 A Yes, they are.

1 a lawyer, how about if I just use something more
2 generic, like matches up, just is it in there.

3 THE COURT: All right. Any problem with
4 matches up?

5 MR. GIANNETTI: That's fine, Your Honor.
6 As long as the word obviousness and opinions of
7 obviousness are kept out.

8 THE COURT: All right.

9 MR. BALDAUF: Okay. I don't want to make
10 this harder than it has to be.

11 Q (By Mr. Baldauf) Okay. Let's talk about the
12 '492 patent. And we can do this much, much more quickly
13 because the whole host of the limitations we just talked
14 about are in these same claims.

15 Quickly, Claim 17, as we have talked about
16 before, is virtually identical to the claim we just
17 talked about. It has a couple of new limitations that
18 aren't in there.

19 The first one: The buyer computer and the
20 shopping cart computer being interconnected by a public
21 packet switched network.

22 Do the CompuServe books disclose that
23 CompuServe and the user computer was interconnected by a
24 public packet switched network?

25 A Yes. All of the networks referred to in that

1 reference are packet switched, and all were available to
2 the public.

3 Q There are two other new limitations in here:
4 A product identifier identifying one of the plurality of
5 products and at least one of which comprises a universal
6 resource locator.

7 And to cause a payment message to be created,
8 the payment message comprising a universal resource
9 locator.

10 So the new thing here is a universal resource
11 locator. What is a universal resource locator?

12 A Actually, it's a uniformed resource locator,
13 and we know it as a URL. It's the address that appears
14 in the address line in a web browser. If I go to
15 www.microsoft.com, that www dot so forth and so on is a
16 URL.

17 Q Was this use of URLs new with the filing of
18 this patent?

19 A No. In fact, the hyper in hypertext comes
20 from the use of URLs and links.

21 Q Was -- were URLs invented by Open Market?

22 A No. They were invented by Daniel
23 Berners-Lee -- I'm sorry, Tim Berners-Lee and his
24 colleagues at CERN in '89 and '90 as the first
25 implementation of html and http was created.

1 Q Are the limitations of Claim 17 of the '492
2 matched up by the CompuServe Mail teachings and basic
3 internet URL functionality?

4 A Anyone who wanted to move shopping to the web
5 would know they had to use URLs to tie things together
6 to deliver information.

7 Q Okay. Moving on to Claim 15. And I'm going
8 to move through this pretty quickly because a lot of
9 these limitations are the same.

10 Hypertext statement system. What is a
11 hypertext statement system?

12 A A hypertext statement system is a linked
13 collection of html documents that represent a statement.

14 Let's talk about a bank statement. You might
15 have a page that has your savings account, your checking
16 account, and your money-market account on it; and then
17 you could click on a link for your checking account and
18 see your transactions for the last month. That's how my
19 bank account works online anyway.

20 Q Okay. So -- you were here yesterday for
21 Mr. Treese's testimony?

22 A Yes, I was.

23 Q Do you agree with him that hypertext, like a
24 URL, is just a basic functionality of the internet?

25 A Of the worldwide web.

1 Q I'm sorry, of the worldwide web?

2 A Yes, it is.

3 Q I keep doing that.

4 And I just pulled out a reference here to the
5 prior art Gifford patent. It just discusses the use of
6 hypertext.

7 A Yes.

8 Q With respect to a lot of these limitations
9 now: A client computer for operation by a client user.

10 And we talked about that in the '314 patent.
11 Is this the same here?

12 A Yes, it is.

13 Q One or more server computers for operation by
14 a server user.

15 Again, same as in the earlier claim. Is it
16 the same here?

17 A Yes, it is.

18 Q The client computer and the server computers
19 being interconnected by a public packet-switched
20 computer network.

21 Actually, this is the limitation we just
22 talked about in Claim 17. Is this likewise taught in
23 the CompuServe Mall book?

24 A Yes, it is.

25 Q Okay.

1 At least one of the server computers being
2 programmed to record information pertaining to purchase
3 transaction records in a database, and to transmit a
4 statement document comprising the purchase transaction
5 records to the client computer over the network.

6 Now this one certainly is different.
7 Could you please refer to this portion of Using
8 CompuServe and explain to us what this teaches?

9 A Absolutely.

10 You will notice in the first paragraph that,
11 when you finish an order and you indicate it's correct
12 and complete, you get something called a confirmation
13 number. That confirmation number is a unique identifier
14 that corresponds to your transactions so that you can
15 look it up anytime you want to in the future and get all
16 the information about that transaction that you might
17 ever need.

18 To any competent programmer, the ability to
19 access a record by a unique identifier means that they
20 know how to find it, and once they've got it in their
21 hands, they can take it and slice it and dice it any way
22 they want to.

23 Q What do the -- what does this passage teach
24 about recording transaction records in the database and
25 transmitting a statement document to a client?

1 A It describes the mechanisms of causing a
2 statement to appear in a hypertext system.

3 Q There's no hypertext system here, is there?

4 A Well, okay. It describes how to access
5 information about a transaction.

6 Q Now, what is a statement document?

7 A Well, we all get bills, right? A statement
8 document is like a bill. It has your name and address
9 on it. It has the company that's sending you the bill.
10 It has an itemized list of charges and taxes and fees
11 and ya-da, ya-da, ya-da, and then there is a number that
12 you've got to pay the note for.

13 Q Is this portion of the claim set forth in the
14 using CompuServe reference?

15 A Yes, it is.

16 Q Next limitation: The client computer being
17 programmed to display the statement document, to receive
18 a request from the client user, to display transaction
19 details corresponding to a portion of the statement
20 document displayed by the client computer, and to cause
21 a transaction detail hypertext link corresponding to the
22 portion of the statement document to be activated.

23 What does Using CompuServe -- I don't want to
24 talk about hypertext right now -- but what does Using
25 CompuServe tell us about the other portion of this claim

1 limitation?

2 A Well, it tells us that we have a way to get at
3 that information. It doesn't tell us anything about how
4 that information gets displayed.

5 And, of course, since CompuServe didn't have
6 hypertext, it couldn't use hypertext for display either.

7 Q And, again, what is hypertext?

8 A Hypertext is, in the case of html, it's a
9 markup language that you use to create web pages.

10 Q Does this limitation match up with the
11 teachings in the Using CompuServe book as well as the
12 basic operation of the worldwide web?

13 A Anyone who could get access to the text in a
14 transaction record would understand how to use html to
15 present that information at a variety of levels of
16 details. That's how they do it for my bank account.

17 That's how you do it for just about any kind
18 of statement.

19 Q And again, is the use of html -- I don't want
20 to say it was invented there, but at least described in
21 the prior art Gifford patent?

22 A Yes.

23 Q A final limitation: At least one of the
24 server computers being programmed to respond to
25 activation of the transaction detail hypertext link by

1 transmitting the transaction details to the client
2 computer over the network as a transaction detail
3 document.

4 What is this explaining to us?

5 A Well, this is basically how you drill down
6 from a higher level of detail in a document to a lower
7 level of detail in a document.

8 To go back to my bank account example. When
9 you click on the line that corresponds to your checking
10 account, you see your checking account deposits and
11 withdrawals for the last 30 days. That's exactly what
12 this refers to here.

13 Q Is this set forth in the basic use of
14 hypertext?

15 A Yes. It's inherent in the basic use of
16 hypertext.

17 Q Do the asserted claims in the '492 patent
18 match up with the teachings of the CompuServe books and
19 basic internet functionality and just plain common
20 sense?

21 A Yes, they do.

22 Q Okay. I'd like to move on to the session ID
23 patent. And I have in front of you right now on the
24 screen U.S. Patent No. 5560008 to Johnson, who was an
25 IBM employee. This is actually an IBM patent filed

1 May 15th, 1989.

2 Could you read this language and explain to us
3 what it means?

4 A Certainly.

5 Here's how it goes: A message, called a
6 request for service, is sent from the user client
7 machine to the server remote machine anytime the service
8 is needed on the remote machine. The request for
9 service contains enough information to insure that the
10 remote user is authorized to use the server and the set
11 of credentials and capabilities the user is to have when
12 using resources on the server machine.

13 The server builds a set of credentials that
14 represent all of the interesting security facts about
15 that remote user. This information includes the user
16 ID, the group ID that the user is in, the group set of
17 other group IDs that the user has access to, an account
18 ID, the set of privileges of the user that allow the
19 user to bypass the normal security restrictions on the
20 system, and so forth.

21 The server establishes all of the credentials
22 for the user, and stores this information in a data
23 structure called the credential structure, and returns a
24 small value, for example, 64 bits, to the client machine
25 where the user is running. This returned small value is

1 referred to as the credentials identifier.

2 Q So please explain to us what that means.

3 A Well, I believe this patent is in connection
4 with the IBM OS/2 Warp server, which was one of the
5 network operating systems that was available along with
6 Novell Netware and 3Com's 3 Server at the time. And it
7 basically describes: How do I log on to a network
8 server over a network?

9 I present my credentials, I get checked out,
10 my rights and permission gets established. All my
11 information gets set up so that I can make subsequent
12 access. And then I get an identifier back that allows
13 me to skip going through the authentication and
14 authorization part the next time I talk to that server.

15 Q And how was this similar to the session ID
16 that we've been discussing?

17 A The same mechanisms that are used to set up a
18 network log-in, apply to establishing a session.

19 Q Let's now turn to the specific limitations of
20 Claim 1 of the '639 patent and show how they match up
21 with Johnson, or the Johnson IBM patent.

22 A method of processing service requests from a
23 client to a server system through a network.

24 What does Johnson explain to us about this?

25 And if you could read the text.

1 A It basically tells us that there is a way of
2 sending messages from the client to server to make a
3 request for service, which is the same thing as a
4 service request.

5 Q So you're saying that a service request is the
6 same thing as a request for service?

7 A Yes, I am.

8 Q Said method comprising the steps of forwarding
9 a service request from the client to server system.
10 Johnson provides that a message, called a request for
11 service, is sent from the user client machine to the
12 server remote machine anytime that service is needed on
13 the remote machine.

14 What does this tell us?

15 A It tells us that when the client wants
16 something, it has a way to ask the server for it.

17 Q Does this disclose this limitation of Claim 1?

18 A Yes, it does.

19 Q Next limitation: Where communications between
20 the client and server system are according to hypertext
21 transfer protocol.

22 Now, will you acknowledge that Johnson does
23 not disclose -- disclose hypertext transfer protocol?

24 A Johnson doesn't disclose any protocol in his
25 patent.

1 Q Again, is hypertext transfer protocol the
2 basic protocol of the web?

3 See, I got it right that time. I didn't say
4 internet.

5 A Thank you.

6 Http is how you get things done between
7 clients and servers on the web.

8 Q Does basic internet functionality, as well as
9 the disclosure in the Gifford patent, disclose the use
10 of hypertext transfer for communications between
11 computers on the web?

12 A Yes.

13 Q Returning a session identifier from the server
14 system to the client, the client storing the session
15 identifier for use in subsequent distinct requests to
16 the server system.

17 A That's the small value that gets returned to
18 the client machine. That's the ticket that says, hey,
19 you know me; I don't have to jump through all those
20 hoops so we can talk.

21 Q So is this limitation disclosed in Johnson?

22 A Yes, it is.

23 Q And finally: And appending the stored session
24 identifier to each of the subsequent distinct requests
25 from the client to the server system.

1 Is this limitation likewise shown in the
2 Johnson IBM patent?

3 A Yes. It says you must present the credential
4 identifier to the server in every request.

5 Q Now. We've heard a lot of testimony
6 throughout this trial directed to the fact that Claims
7 78 and 79 are virtually identical to Claim 1 with the
8 addition of a couple limitations.

9 I don't want to spend any more of the jury's
10 time than I have to on this hypertechnical stuff.

11 However, does the text of Johnson itself
12 likewise match up with all the limitations of Claim 78
13 and 79?

14 MR. GIANNETTI: Your Honor, I object. 78
15 and 79 were the subject of the motion in limine. I
16 don't believe this is really consistent with the ruling
17 on that motion.

18 MR. BALDAUF: Your Honor, we had this
19 argument last Monday.

20 THE COURT: All right. Counsel,
21 approach.

22 I tell you what. We have been going for
23 almost an hour and a half. Why don't we go ahead and
24 take a 15-minute break. We will be in recess until --
25 actually we've been going almost two hours. So y'all

1 have been very patient.

2 Are you about through with this witness,
3 Counsel?

4 MR. BALDAUF: This was actually my last
5 question.

6 THE COURT: I'm afraid to recess because
7 I'm afraid you'll think of three or four more.

8 So, Counsel, approach the Bench and let's
9 see if we can deal with this very quickly.

10 (Bench conference.)

11 MR. GIANNETTI: Your Honor, here is the
12 issue. Your Honor, at the motion in limine hearing,
13 there was an issue as to these two claims, 78 and 79.
14 They were not covered in their expert report. And I
15 believe Mr. Baldauf will agree to that.

16 So the Court ruled that Mr. Baldauf --
17 Mr. Baldauf made the representation that they are very
18 similar to Claim 71 --

19 MR. BALDAUF: Claim 1.

20 MR. GIANNETTI: -- Claim 1, excuse me.

21 And, in fact, they are, except they do
22 contain some additional limitations.

23 So Your Honor's ruling was that --

24 THE COURT: He didn't cover it in his
25 report?

1 MR. BALDAUF: He did not. If I may, Your
2 Honor. We discussed this in the motion, and this is the
3 claim that was set forth in our supplemental invalidity
4 contentions that they have had since August. And as I
5 explained to the Court, we're doing a reference in Claim
6 1 --

7 THE COURT: You can do that, but you
8 can't do it with this witness if he didn't cover it in
9 his report. Did he cover it in his report?

10 MR. GIANNETTI: No, he did not.

11 MR. BALDAUF: Not this specific claim,
12 no, because this is one that was added later and was not
13 part of --

14 THE COURT: Claim 3?

15 MR. BALDAUF: It was briefly before his
16 report --

17 MR. GIANNETTI: Briefly before. We gave
18 additional notice and gave additional time to prepare
19 the report, we added the claims. We said we will give
20 you more time for the report, and they still didn't --

21 THE COURT: All right. Sustain the
22 objection.

23 (Bench conference concluded.)

24 THE COURT: All right. Any more
25 questions for this witness, Counsel?

1 you weren't saying that they don't use a -- a
2 network-based sales system.

3 You weren't saying that Newegg does not use a
4 network for sales, were you?

5 A No, I was not.

6 Q Okay. And while you mentioned that the buyer
7 computer was something that they didn't use, isn't it a
8 fact that once someone accesses the Newegg website,
9 Newegg sends messages to that computer concerning --

10 A Yes, sir.

11 Q -- concerning selling products?

12 A Yes, that's true.

13 Q And you don't consider that to be using that
14 computer by Newegg to sell its products?

15 A No, sir. I don't necessarily consider that
16 use.

17 Q Well, you mentioned something about free will
18 or maybe your counselor did.

19 Yes, it's true that once someone -- that the
20 decision whether to access the website may be up to the
21 customer, but once the customer gets on the website,
22 wouldn't you agree that the choices are limited by that
23 information which is presented by Newegg?

24 A The choices that appear on the web page are a
25 direct reflection of the contents of the html documents

1 that are delivered to that page.

2 Q And those --

3 A But in addition to the choices that appear on
4 that page, the user always has the option to bail out.
5 They don't have to do anything. They can close the
6 browser and go do something else. That's the free-will
7 element, I think.

8 Q Just -- just to use a brick-and-mortar
9 comparison, if I may. You always have the choice
10 whether to shop at Macy's or some other store; but once
11 you're in the store, you have to choose from among the
12 products that Macy's provides.

13 And that's -- isn't that the same with Newegg?

14 A Well, you -- you always have the option of
15 heading for the door anytime you don't want to shop.

16 Q And that's true, also, with the website, isn't
17 it?

18 A Of course it is.

19 Q So it's really no different than a
20 brick-and-mortar store in that respect, is it?

21 A Except for the fact that I can get into that
22 store from my living room or in my pajamas or maybe even
23 in some other condition, absolutely.

24 Q Well, I'll accept that difference. I think
25 from the point of view of my comparison, I don't think

1 that makes a difference, but I will accept that.

2 Okay. So let's talk about the other elements
3 of this claim that you mentioned.

4 In 34(f), I think you -- you focused on the
5 word respective; is that right?

6 A Yes, I did.

7 Q And you said that that is what suggested to
8 you that there had to be a one-to-one updating of the
9 database, as you put it, each time a product was -- was
10 selected; isn't that right?

11 A Well, if -- if you wanted --

12 Q Isn't that right, sir?

13 A Well, may I make a qualification or --

14 Q Well, first, answer my question.

15 A Yes, but that fails to take the possibility of
16 deletion or change into account.

17 Q Of what? I'm sorry?

18 A Change, as in change of quantity, or deletion,
19 as in removal of an item, into account.

20 Q Okay.

21 A You could do all of those things.

22 Q But you -- but the word respective is critical
23 to your analysis on this particular point, isn't it?

24 A Absolutely.

25 Q In fact, your whole analysis of this turns on

1 the word respective.

2 A I wouldn't say the entire analysis hinges on
3 it, but a part -- a portion of it certainly does, yes.

4 Q The piece of it that relates to the updating
5 of the database turns on the word respective, correct?

6 A Yes.

7 Q Okay. Now, the Court hasn't construed this
8 term; isn't that right?

9 A I'm sorry. Would you repeat the question?
10 I'm having a little trouble hearing you.

11 Q The Court has not construed this term. It's
12 not in the Court's claim construction that you have
13 before you, is it?

14 A No. Respective is not in there. I checked.

15 Q So you picked the definition for that; isn't
16 that true? You interpreted that in a certain way, the
17 Ed Tittel interpretation of that.

18 A Well, actually, what I did was I thought about
19 the way in which I heard it used in ordinary discourse,
20 and I figured that since it wasn't part of the claim
21 construction, that the rules of ordinary discourse would
22 apply.

23 Q Do you believe that opinions can differ as to
24 that meaning?

25 A I beg your pardon, sir?

1 Q That opinions can differ as to that meaning?

2 A Again, I'm having trouble hearing what you're
3 saying.

4 Q That opinions can differ as to the meaning of
5 that term. Would you -- would you concede that they
6 can?

7 A Opinions can always differ, but common
8 understandings are also common understandings.

9 Q Okay. You're not pointing to any dictionary
10 definitions or any authoritative sources that you're
11 aware of, are you?

12 A No, I'm not. I didn't think it was necessary.
13 I think I know what the word means.

14 Q Okay. Well, what -- what about the
15 possibility that there is a one-to-one correspondence
16 between requests and products? Isn't that another
17 possibility for the word respective?

18 A No, that is not another possibility. That is
19 exactly what I was trying to say.

20 Q At least not in your view of that term?

21 A I'm confused. I don't understand -- I think
22 I've agreed that, to me, respective means not
23 necessarily one to one in the sense of item for item,
24 but it does mean one to one in the sense of action for
25 action, so that for each addition to the shopping cart,

1 there is a change to the database; for each deletion
2 from the shopping cart, there is a change in the
3 database; for each change in quantity, there's a change
4 to the database.

5 That's the sense that I meant respective.

6 Q Well, how about this interpretation: For each
7 request, there is a product? Isn't that an equally
8 viable definition or an equally applicable one?

9 A I don't think so.

10 Q Okay. Well, so you differ in opinion with --
11 with Dr. Grimes; is that right?

12 A Yes, I do.

13 Q But you can't point to anything specific that
14 support your opinions, can you?

15 A Other than a common understanding of the
16 English language, no, sir.

17 Q But you will admit that if your interpretation
18 of that term is incorrect, then your analysis that
19 follows from it is wrong; isn't that true?

20 A Certainly.

21 Q Now, the next element is 34(h), and that has
22 to do with modifying the shopping cart in the shopping
23 cart database; that's correct?

24 A Yes, sir.

25 Q So you're not quibbling with the idea that

1 on this claim; is that right?

2 A No, I have nothing further at this time.

3 Q Now, let's take a look at the next one.

4 MR. GIANNETTI: Very interesting.

5 Claim 17. Do you have a chart for Claim 17?

6 Q (By Mr. Giannetti) I think in your analysis of

7 Claim 15 there was an issue about what was stored --

8 storing and the issue of storing information, storing

9 session identifier.

10 You testified -- when we get the claim up.

11 You testified about the question about who does what in

12 connection with Claim -- I believe it was Claim 15. And

13 there was a question about returning a session

14 identifier for the server system to the client, the

15 client storing the session identifier for use in

16 subsequent requests.

17 A Yes.

18 Q Do you recall that?

19 A Yes, I do.

20 Q And I think your position on that was that the

21 storing function is really done by the -- by the

22 customer's computer; is that right?

23 A Yes, sir.

24 Q And that's something that's out of Newegg's

25 control; is that right?

1 A And that's something that's out of what?

2 Q Newegg's control.

3 A Newegg does not do the storing, sir. The
4 browser on the customer computer does the storing.

5 Q And I think your position was the same for
6 that portion of the claim which talks about appending
7 the storage session identifier. Do you recall that?

8 A Yes, I do. Yes, that's correct.

9 Q Well, isn't it true that this is a mechanism
10 that Newegg takes advantage of?

11 A It's inherent to the behavior of the worldwide
12 web.

13 Q And it's something that Newegg takes advantage
14 of when they designed their system; isn't that?

15 A Yes, it is.

16 Q And so to say that it's -- it's done by the
17 client, isn't it true that it is really done by the
18 client because of the information that's sent by Newegg?

19 A Yes, but it still happens as a result of
20 computer executions that are carried out on the client
21 computer.

22 Q Okay. I think we have the claim up.

23 Returning the session identifier from the
24 server system to the client and appending the storage
25 system identifier.

1 Do you recall that analysis?

2 A Yes, sir.

3 Q This is the portion of the claim I'm talking
4 about.

5 All right. This information is sent -- there
6 is information sent from the server to the client that
7 basically directs the client to set the cookies; isn't
8 that true?

9 A Yes, that's true.

10 Q The client would not create the cookie or set
11 the cookie and change it if it were not for instructions
12 that were received from Newegg; isn't that true?

13 A Yes, that is true.

14 Q So when you say that this is -- these steps
15 are being performed by the client, they're being
16 performed by the client in response to instructions sent
17 by Newegg?

18 A Those instructions are sent by Newegg, but the
19 client computer is still the one that carries them out.

20 Q Without those instructions, the client
21 computer with not carry those steps out, would it?

22 A No, it couldn't.

23 Q Computers don't have free will, do they?

24 A Not in any likable way.

25 (Laughter)

1 those three manuals that you talked about; is that
2 right?

3 A Yes, that is correct, yes.

4 Q And, in fact, do you agree with Dr. Trevor, or
5 Mr. Trevor, that the manuals that you testified about
6 don't show how to implement the shopping cart?

7 A No, they do not.

8 Q And you also testified that the messages that
9 go from the client to the server that you testified
10 about are not shown there; isn't that right?

11 A No, the messages are not shown, that's
12 correct.

13 Q And, in fact, the books themselves don't show
14 how to implement the database that you talked about?

15 A No, they don't.

16 Q He said that, and you agree with him?

17 A I do agree with him.

18 Q And that the personal holding file that you
19 equated to the database -- to the shopping cart --

20 A Yes, sir.

21 Q -- that is -- the implementation of that isn't
22 shown either?

23 A No, no implementation is shown.

24 Q What you said was that -- you used the term
25 reverse engineering. You said these manuals or these

1 books could be reverse engineered and people could
2 figure out how to do these things; isn't that what you
3 said?

4 A Yes, sir, that is what I said.

5 Q Isn't it true that when people talk about
6 reverse engineering they're usually talking about a
7 physical device, like a piece of software or a computer?
8 Isn't that what people are usually talking about?

9 A My understanding of reverse engineering refers
10 to an ability to recreate a system or to create a system
11 with similar functionality as to what we might call the
12 inspiring system or the original system.

13 I don't think it has to come from a piece of
14 hardware or a piece of software. I think it could come
15 from a specification or even from an understanding of
16 how a system behaves.

17 Simply knowing that you can do something like
18 store information about purchases means that a competent
19 programmer can figure out how to do it.

20 Q If there's something not described there, for
21 example, the database, what is there to reverse
22 engineer?

23 A A -- a qualified programmer would understand
24 that because the CompuServe Mall supported --

25 Q Sir, would you answer my question?

1 What is there to reverse engineer if there is
2 nothing there?

3 MR. BALDAUF: Your Honor, he was
4 answering the question.

5 THE WITNESS: I was answering the
6 question.

7 MR. GIANNETTI: I don't think he was,
8 Your Honor.

9 THE COURT: All right. Restate your
10 question.

11 Q (By Mr. Giannetti) My point is: If there is
12 no description of the database, how could the reverse
13 engineer or the programmer use the information in there
14 to build a system?

15 A They could infer from the visible behavior of
16 the system that numerous other components were present
17 in the background, even though they might not have been
18 directly obvious or explicitly described.

19 Given a system where you have multiple
20 concurrent users and you want to manage data for them,
21 the accepted best practice in the industry since the
22 1970s has been to use a database for that kind of use.

23 Q Well, we've talked in this case about various
24 ways of implementing shopping carts; is that right?

25 A Yes, we have.

1 Q So what is there about the description in
2 those books that would necessarily tell someone how to
3 implement a shopping cart in a particular way?

4 A I believe I answered that question with my
5 previous answer.

6 Q You're saying that the descriptions in there
7 are so clear that they would point to one particular
8 implementation for a shopping cart?

9 A No. What I am saying is I think they would
10 suggest a number of reasonable possible implementations,
11 and that, for reasons of efficiency and security and
12 reliability, that it would make sense to consider a
13 database among those alternatives.

14 Q But no one particular way; is that right?

15 A No, sir, no, definitely not.

16 Q Now, were you here when Mr. Wu testified?

17 A Yes.

18 Q Do you think he knows a little bit about
19 programming E-commerce systems?

20 A Yes, I do.

21 Q My memory isn't a hundred percent, but I
22 thought Mr. Wu said, in answer to some questions on
23 cross-examination, that if you looked at a website you
24 couldn't -- you couldn't reverse engineer it. You
25 couldn't tell exactly how it was implemented. Isn't

1 two or three years. And I'm currently employed by
2 Harvard Business School, and I'm on the faculty.

3 QUESTION: Do you have any opinion as to
4 the value of the shopping cart technology in the scheme
5 of the overall Transact product?

6 ANSWER: No. It's one of the pieces
7 that's necessary.

8 QUESTION: Necessary how?

9 ANSWER: It's hard to imagine someone
10 doing shopping without some functionality like that;
11 otherwise, every transaction would be unique and
12 different.

13 QUESTION: What do you mean by unique and
14 different?

15 ANSWER: You'd have to -- if I was buying
16 six things from the store, I'd have to buy each one as a
17 complete transaction. So no different than if you
18 walked into a store and had to buy each element, go in
19 and buy the first thing in the grocery store and come to
20 the checkout counter, put that in the bag, and go back
21 again.

22 QUESTION: Do you have any opinion as to
23 the value of the methods of storing state in the scheme
24 of the Transact product?

25 ANSWER: It's critical. So without

1 state, it's really hard to imagine how you could conduct
2 commerce, or for that matter, anything of any value.

3 QUESTION: What, in your opinion, drove
4 the customer demand for Transact?

5 ANSWER: It was a unique product. It was
6 complete. It did all of the functions, almost -- you
7 know, at different time periods, different -- there were
8 different elements of value.

9 In the early stages, it was the only one.
10 In the later stages, it had a particular philosophy and
11 was very useful if you wanted to operate multiple sites
12 or multiple products or you wanted scale or you wanted
13 something very secure. It was the high end of the
14 market, the higher end of the market.

15 QUESTION: What made it better than
16 competing products in terms of large scale or multiple
17 stores?

18 ANSWER: That's what I did. It could
19 handle large scales. It could handle multiple stores.
20 It could handle multiple methods of connecting to it.
21 If you were a large company and you didn't want to
22 change your whole operation, it fit into your
23 environment because it had so many different options in
24 it.

25 It -- just as an example, it could handle

1 soft goods and hard goods. If you were selling an
2 article and you were selling a CD, one was delivered
3 physically, and one was delivered online.

4 And from a software perspective, these
5 are very different things, and it could do both of
6 those. It could do subscriptions. It could do single
7 sales. It could do warranties. It could do a whole
8 range of these things.

9 QUESTION: Are there any other features
10 of Transact that you believe drove the customer demand?

11 ANSWER: It was an end-to-end product, so
12 it allowed somebody to do everything from the beginning
13 to the end, offered -- offered a shopping experience,
14 and that was somewhat unique.

15 QUESTION: What caused Open Market to be
16 sold to Divine?

17 ANSWER: The business was in pretty bad
18 shape. The company was losing money and did not have a
19 huge cash balance, and the public markets were not
20 available to raise additional capital.

21 QUESTION: We had discussed earlier that
22 certain features of the Transact product were patented
23 by Open Market. Had Open Market ever threatened to sue,
24 under its patents, any of its Transact licensees?

25 ANSWER: Not that I recall.

1 QUESTION: Had it ever actually sued any
2 of its licensees under its --

3 ANSWER: Not that I recall.

4 QUESTION: -- patents?

5 Do you know why Open Market did not?

6 ANSWER: Why would we sue our customers?

7 QUESTION: That's not what I'm asking.

8 Would Open Market have and why not?

9 ANSWER: No, unless there was an
10 egregious violation of a patent. So I can imagine that
11 if somebody bought a license from us to do one thing,
12 and the company -- IBM could have bought a license from
13 us, you know, for one of their businesses and then chose
14 to create a product that violated our patents, I
15 wouldn't see a problem with suing them on that.

16 QUESTION: Mr. Ghosh, if Newegg had
17 approached you in 2001 seeking to license Transact from
18 Open Market, what would your reaction have been?

19 ANSWER: We'd have licensed it.

20 QUESTION: You would have licensed it to
21 them?

22 ANSWER: Yes.

23 QUESTION: In your experience, would you
24 expect that license to have been more like a merchant
25 license or more like a CSP license?

1 ANSWER: More like a merchant license,
2 probably.

3 QUESTION: Why is that?

4 ANSWER: If they were just selling their
5 own stuff.

6 QUESTION: As opposed to them wanting to
7 host the stores of third parties?

8 ANSWER: Right. Right.

9 QUESTION: What terms would you expect to
10 be able to license Newegg for Transact?

11 ANSWER: I have no idea, but standard
12 terms. I can't see why it would be different.

13 QUESTION: And by standard, you mean
14 terms similar to those of other merchants or single-user
15 agreements?

16 ANSWER: Yes.

17 QUESTION: If Newegg were licensed under
18 Transact, would you expect the license fee to be a
19 lump-sum payment?

20 ANSWER: Probably.

21 QUESTION: Would you expect their
22 maintenance and service to be roughly 20 to 30 percent
23 of that lump-sum payment?

24 ANSWER: Yes.

25 QUESTION: Would you expect Newegg to pay

1 any license fees on an ongoing basis?

2 ANSWER: No.

3 QUESTION: Would you expect Newegg to pay
4 any fees based on revenues?

5 ANSWER: Probably not.

6 QUESTION: Would you expect Newegg to pay
7 any fees based on the number of transactions that are
8 performed via its website?

9 ANSWER: Probably not.

10 MR. BREAN: I have no further questions.

11 (End of video clip.)

12 MR. SAYLES: That concludes the
13 deposition of Shikhar Ghosh.

14 At this time, we would call Mr. Chris
15 Bakewell.

16 THE COURT: Okay. Mr. Bakewell.

17 COURTROOM DEPUTY: I don't believe he's
18 been sworn.

19 THE COURT: Have you been sworn,
20 Mr. Bakewell?

21 THE WITNESS: I haven't been sworn.

22 THE COURT: All right. If you would,
23 please raise your right hand to be sworn, sir.

24 (Witness sworn.)

25 MR. SAYLES: May it please the Court.

1 things that Mr. Nawrocki and I agree upon.

2 Q Would you explain that, please.

3 A Sure.

4 We both agree that the license at issue here,
5 it would be a non-exclusive license.

6 We both considered the Georgia-Pacific
7 Factors. Those are the 15 factors that Mr. Nawrocki
8 explained.

9 We agree upon the hypothetical negotiation
10 date of January 2001.

11 We agree that damages begin in November of
12 2007. That's a different date than the hypothetical
13 negotiation date. We're actually required to make that
14 assumption by law.

15 And then we also agree that Open Market is
16 unprofitable or would have been unprofitable at the time
17 of the hypothetical negotiation.

18 Q And is that what the hard facts and the
19 evidence shows in this case?

20 A Absolutely, yes, sir.

21 Q And what about the issue of the so-called
22 convoyed or collateral sales? Do you remember
23 Mr. Nawrocki addressing that?

24 A I do. It may not have been apparent to
25 everyone in the courtroom, but there's a Georgia-Pacific

1 I think I can describe it conceptually first.

2 Q All right.

3 A When I think about this case and the
4 difference between Mr. Nawrocki's damages opinion and
5 mine, I think about when I go to the grocery store.

6 When I go to the grocery store with my kids
7 and load up the grocery cart with groceries, the grocery
8 cart is there free, and I don't have to pay to use the
9 grocery cart. I don't have to drop money in a bucket
10 when I leave.

11 If I buy a pack of gum or if I load the thing
12 up with -- cereal is what my kids like the most, I -- I
13 don't have to pay and nor does the grocery store. They
14 paid for the carts one time upfront.

15 Q All right. So let's list your areas of
16 disagreement, if you would, on the slide that you
17 prepared and just outline those to the jury first, and
18 then we'll take them one by one.

19 But I want them to hear where your areas of
20 Mr. Nawrocki's mistakes, in your opinion, lie.

21 A Yes, sir.

22 Well, the first point, his royalty base
23 includes unrelated sales. I think that, in some ways,
24 relates to the example that I just gave about the
25 grocery cart.

1 understood between any parties in a negotiation -- that
2 the only portion that is appropriate is the part that is
3 causing people to make a purchasing decision.

4 And Mr. Nawrocki said on cross-examination, he
5 did no analysis of that whatsoever.

6 Q All right. You've read his reports?

7 A Yes, sir.

8 Q You've read his deposition?

9 A Yes.

10 Q And he acknowledges in court that he can cite
11 no evidence that indicates the patented features drive
12 the sales of the Newegg products?

13 A That's right. He did in open court.

14 Q And with respect to the analysis of your
15 calculations, are there any charts that would support
16 your view that the demand is driven by other factors?

17 A Well, there are. There's a survey that was
18 conducted by Newegg. It's actually conducted on a
19 regular basis. And we'll come to it, I think, in maybe
20 two or three slides.

21 Q All right.

22 A Newegg -- just to go to your question, Newegg,
23 in its ordinary course of business, prior to this
24 lawsuit even being filed, never listed shopping cart
25 technology as something that is important to its

1 customers.

2 It submits a -- it has a survey on its website
3 that it uses for feedback to get feedback from
4 customers, and it lists things like did you like our
5 products? Was our delivery fast enough? How -- how
6 about our prices?

7 And we'll see that when we get to it.

8 Q All right.

9 A A couple more slides.

10 Q All right. And would you take us to the next
11 step in your analysis, please.

12 A So the next step in the analysis is, out of
13 this \$6.30, to try to figure out how much of that is
14 related to the -- the computer, let's say the screen
15 itself, or in this case, the closest I could find from
16 the research that I performed were references to the
17 Intuitive website layout and design, one reference to
18 that.

19 This slide here that's up right now lists, in
20 fact, 21 different factors that I observed in my
21 research.

22 Some of them we'd expect to see, and they fit
23 into the answer I just gave you, brand name being one,
24 site contact, like the actual monitor itself, customer
25 relations, the fact that it offers a private-label

1 credit card. One of them relates to the Intuitive
2 website and design.

3 So on a fraction basis, 1 out of 20 is 5
4 percent. So it's a little bit less than 5 percent
5 credit, I think, goes to just the Intuitive website
6 layout and design. That's something, obviously, much
7 broader than what the patents are.

8 Q All right. Are -- these factors that you have
9 put on this chart that are an assessment of Newegg's
10 success, are they based on documentation and evidence?

11 A Oh, yes, sir. I went and conducted research
12 and looked through documents produced in this lawsuit,
13 and every time a different attribution of Newegg's
14 success came up, I listed it out, and it is based upon
15 actual evidence in the case, yes, sir.

16 Q All right. Would you take us to the next
17 step, please?

18 A Okay. So from that, remember, I said 1 out of
19 20 is 5 percent. Well, I know that Mr. Nawrocki
20 contends that the technology here is fundamental and
21 very important, and I've accepted that.

22 And so I took that 5 percent, and for purposes
23 of being conservative, I doubled it. And so I gave 10
24 percent credit.

25 So out of that \$6.30 that was available, I

1 credited 10 percent to the website layout and said,
2 look, 90 percent relates to other things, and I took
3 that off the table.

4 So that turns the \$6.30 into 63 cents.

5 Q And is this based on financial statements of
6 Newegg?

7 A It is. That's what the \$6.30 is from.

8 And then the next bar is taken from the other
9 research that I conducted regarding -- from analysts
10 reports and independent observations on market -- from
11 the marketplace.

12 Q Did you also have at your disposal, for review
13 and consideration, Newegg documents where they assessed
14 internally the factors that contributed to the online
15 shopping experience?

16 A Yes, sir, I did.

17 Q Is that important?

18 A That's important.

19 Q And can you walk us through that and tell us
20 what that significance is?

21 A Sure. Sure.

22 So this -- so I have two bars. And remember,
23 I said there's going to be four.

24 So the next bar, the third bar, relates to how
25 much of that website layout generally could possibly

1 relate to the fact that there's a shopping cart on the
2 website.

3 And so what I found that I thought was the
4 most meaningful for measuring that was an internal --
5 actually, it's on their website -- a document that --
6 from Newegg's website that attributes all of the factors
7 on its website that it believes are important. And I
8 think this predates the lawsuit, too.

9 Q All right.

10 A This is the document.

11 Q And is this slide a summary of what those
12 factors are that Newegg believes contribute to the
13 online shopping experience?

14 A It is.

15 So back in 2005, Newegg announced its new
16 website design, and it issued a press release. And when
17 it did that, it described the Intuitive website layout
18 and design and also listed 12 other factors that are
19 relevant or it highlighted when it released the updated
20 website.

21 Those things included things that I would
22 expect to hear based upon what I've seen sitting here in
23 the courtroom so far: Comparison of products, rollover
24 and guided navigation, reviews of products, photos,
25 how-to videos, and things of that nature.

1 Q All right. And in summary, is what all these
2 facts and data shows is that the online shopping
3 experience and the success of Newegg is attributable to
4 many factors other than these alleged patented --

5 A Yes, sir, that's exactly what it says.

6 Q And have you walked us through now the factors
7 that you considered on the online shopping experience,
8 or is there yet more?

9 A I have -- well, I turned that into a
10 calculation again. 1 over 13 as a ratio is roughly 8
11 percent, a little bit less than that.

12 And so I took that ratio, and I applied it to
13 that -- this is just another listing of the same
14 factors, the same 13 factors.

15 Q All right. And wait. Back up for just a
16 minute there --

17 A Sure.

18 Q -- because I want to point out, you cited on
19 some of these actual source documents at the bottom. Is
20 this -- go to the next slide.

21 Is this actually exhibits where you've read
22 them, reviewed them, and taken them into account?

23 A Yes, sir. This is --

24 Q Hard evidence?

25 A Yes, sir.

1 Q All right. All right. Go to the next one.

2 A So 1 out of 13 is roughly 8 percent. I
3 rounded up. That means you have to take 92 percent of
4 the remaining amount off the table. That turns that 63
5 cents from a hundred-dollar transaction into 5 cents.

6 So that's the amount that's available to
7 apportion between the parties, the possible benefit
8 attributable to the invention.

9 Now, notably, nowhere in this analysis did --
10 were there any reference to specifically shopping cart
11 or session IDs. So, yeah, I think it's safe to assume
12 that this 8 percent measures something broader than the
13 patents we're discussing here today.

14 So, again, this number, I think, is
15 conservative as well.

16 And that leaves -- as I said, out of that
17 hundred-dollar transaction for the monitor, there's 5
18 cents that are left over to be split up that could
19 possibly be attributed to the patented invention.

20 Q All right. You indicated that there were four
21 bars. Is there yet another step?

22 A And so there is yet another step.

23 Just one, kind of, side comment. We heard
24 Mr. Wu testify about the lines of code that relate to
25 the patented technology. I have that in real small

1 January 2001 that's shown here is the alleged
2 date of the first infringement, and that would be when
3 the jury is to consider the hypothetical negotiation.

4 A Just the hypothetical negotiation. Not
5 damages --

6 Q All right.

7 A -- but the hypothetical negotiation.

8 Q And at that time, Open Market owned the
9 patents, as well as the Transact product.

10 A That's right.

11 Q And you mentioned the sale. That was to
12 Divine in August of 2001 after the hypothetical
13 negotiation.

14 A Just after. I mean, we -- in our practice,
15 we'll incorporate that type of information into our
16 analysis.

17 Q Well, let's just look at the date of the
18 hypothetical negotiation.

19 What's the bottom line on Open Market's
20 financial status then?

21 A Well, as I said, by that point in time, Open
22 Market had lost \$236.4 million. It had gone seven years
23 without earning a profit.

24 Q Why is that important?

25 A Well, it shows that the patented invention

1 parties important to what they would have likely agreed
2 to?

3 A It's very important, very important. The
4 hypothetical negotiation requires an analysis of the
5 facts and circumstances present at that point in time.

6 Q All right. Let me take you now to the next
7 area of disagreement, if I could --

8 A Okay.

9 Q -- all right?

10 You said at the beginning that Mr. Nawrocki
11 ignored real-world licenses and other real-world
12 evidence. Let's deal with that for a moment.

13 A Okay.

14 Q Could you tell us what you mean by this,
15 please?

16 A Well, the deposition testimony that was played
17 just before I testified, I think, summarized the notion
18 of this quite well.

19 Mr. Ghosh -- Mr. Ghosh, in fact, explicitly
20 went against the grain of the damages model that
21 Mr. Nawrocki set forth. He said any transaction that
22 would occur between the parties would not be a running
23 royalty type of transaction. That's a real-world
24 consideration.

25 The other thing that comes to mind when I look

1 influenced by other factors other than the technology
2 itself.

3 Q All right. Did you consider certain specific
4 Open Market and Divine licenses that are now in evidence
5 in this case?

6 A Yes, sir.

7 Q And have you summarized that on Slide 13?

8 A I have.

9 Q And would you explain to the Ladies and
10 Gentlemen of the Jury what it is that's summarized on
11 Slide 13, please.

12 A Okay. Well, this provides account of the
13 different forms of royalties that appear in these patent
14 licenses.

15 And by form of royalties, I mean whether the
16 license is structured to be a one-time lump-sum payment,
17 or if there's royalties that accumulate indefinitely
18 over time.

19 And all of them actually, in my opinion --
20 I've separated one out, and I'll discuss it briefly, why
21 I don't think that's a running royalty either; but all
22 of them have predetermined or determinable amounts that
23 stop after a certain period of time. We refer to
24 that -- we refer to that in the licensing field as being
25 a lump sum.

1 The one that I listed as being as a lump sum,
2 plus a variable component, was a license entered into in
3 October of 2002 between Divine and Bikecology. I had
4 included a 4,000-dollar payment.

5 There was a very small running royalty of 0.2
6 percent of gross sales that was applied, at least small
7 relative to what Mr. Nawrocki's damages opinion is.

8 And what's important to observe is that I did
9 some research, and it's in the footnote, that the entity
10 that that amount related to was sold right around the
11 time of the -- of that license.

12 So in my mind, from an economic perspective,
13 that's a lump-sum license as well.

14 Q All right. Now, are these licenses that
15 you've summarized on Slide 13, the ones that are in
16 evidence in this case, are they exhibits that are
17 indicated on the bottom of the slide here?

18 A Yes, sir.

19 Q And are these licenses that were entered into
20 around the 2000 to 2002 or '3 timeframe?

21 A Yes, sir.

22 Q Closer to the time of the hypothetical
23 negotiation?

24 A That's correct, yes, sir.

25 Q And with respect to the running royalty that

1 Mr. Nawrocki has calculated, are these licenses that are
2 in evidence contradictory of that?

3 A They're very different. Mr. Nawrocki
4 calculates a running royalty that continues on over a
5 long period of time, whereas these had predetermined
6 amounts that were determined -- that are lump sum in
7 nature.

8 Q All right. And for the patent license in
9 evidence that indicate that Divine generally entered
10 into running royalties, have you summarized those on
11 Slide 13A?

12 A Okay. But I have to correct your question.

13 Q Yes.

14 A I think that they didn't generally enter into
15 running royalties. They generally entered into lump-sum
16 licenses.

17 Q You are correct.

18 A And that's summarized in this slide that's up
19 now.

20 Now, from my perspective, when I was sitting
21 back in the courtroom, when these licenses were shown,
22 it seemed that -- particularly during Mr. Nawrocki's
23 testimony, the focus was on the percentages. But in
24 each of these, if they're read more closely, these
25 percentages are really lump-sum amounts.

1 Say, for example, the third one down --

2 THE WITNESS: If you can point to that.

3 A -- Webster Orchard, that, I think, was one
4 that came up a couple of days ago. It says 2 percent of
5 gross sales, but it's 2 percent of gross sales in 2001,
6 only in one year. And that's a calculable lump-sum
7 amount. And, in fact, that amount turns out to be
8 \$2,000.

9 Q (By Mr. Sayles) And you were in the courtroom
10 when I cross-examined Mr. Nawrocki, and he acknowledged
11 that that license was through the life of the patent?

12 A Yes, sir.

13 Q And that even though this recital is in the
14 license, you heard him acknowledge that was a one-time
15 payment?

16 A That's right.

17 Q Now, have you also summarized further these
18 licenses that are in evidence in this case to compare
19 them to Mr. Nawrocki's damage model?

20 A I have. I've prepared -- prepared a
21 demonstrative that shows this. And this is a bit of
22 a -- it was a bit of a challenge to make, because as
23 you'll see -- I don't know if you can point to the
24 axis -- we call it the X axis, the axis that goes up and
25 down where there's \$30 million, I had to break it

1 because these amounts are so small relative to
2 Mr. Nawrocki's damages conclusion of \$34 million.

3 And, in fact, when you add it all up -- add
4 all of the lump sums up, they total just about \$200,000.
5 Mr. Nawrocki's damages conclusion is about 150 times
6 larger than that.

7 Q All right. Let me be sure we have this
8 correctly.

9 Does this slide accurately summarize the
10 revenues from the Open Market and Divine patent
11 licenses --

12 A Yes, sir.

13 Q -- that were non-settlements of litigation
14 lawsuits?

15 A Yes, sir.

16 Q And you're telling us that the total of every
17 one of them, including the Johnson & Johnson one for a
18 hundred thousand, is a total of 200,000?

19 A About \$200,000, yes, that's correct.

20 Q And Mr. Nawrocki's calculation of \$34 million
21 in damages is how much compared to that?

22 A About a hundred and, I think, 65 times higher.
23 It's more than 150 times higher. And it's a -- it's a
24 running royalty, so, presumably, it just continues to
25 grow even larger than -- than that.

1 Q Did you also consider the Transact single-user
2 software licenses?

3 A I did. I considered those as data points.

4 Q And -- as data points?

5 A I did.

6 Q Would you tell the Ladies and Gentlemen of the
7 Jury what you mean by that in your analysis, please?

8 A This is something I considered, particularly
9 given Mr. Ghosh's testimony; and I think we've heard
10 others beyond Mr. Ghosh, Ms. Wolanyk and technical
11 experts as well, discuss how the patents are embodied in
12 the software. So that's a fancy word -- the patents are
13 included in the software, the patented technology at
14 least.

15 And because those transactions were entered
16 into between willing parties, and the patented
17 technology was part of the up-front payment, and the
18 up-front payment is granted access to the patented
19 technology, I reviewed those up-front portions and
20 measured them against my damages conclusions.

21 Q All right. Now, I want you to show us the
22 summary of that in a moment, but let's get this
23 straight.

24 A patent license is different from a software
25 license.

1 A Oh, yes, sir, they're different.

2 Q And with respect to what would have happened
3 in a hypothetical negotiation in 2001, why do you
4 consider the Transact software licenses as somehow being
5 informative?

6 A Well, because they included access to the
7 patented technology. The patented technology was some
8 subset of the software licenses.

9 They're also meaningful because they're
10 arm's-length agreements that reflect a bargain between
11 two parties in the marketplace at arm's length.

12 And so they are informative in my view of at
13 least the reasonableness or the reasonable royalty
14 conclusion in this matter.

15 Q Did you prepare some slides that demonstrate
16 the data point of the Transact software licenses?

17 A Yes, sir, I did.

18 Q Would -- and are these figures based on source
19 documents that are in evidence as exhibits that are
20 marked at the bottom of the slide?

21 A Yes, sir, that's correct.

22 Q Hard facts and data?

23 A Yes, sir.

24 Q All right. Would you explain what's shown
25 here?

1 A So I've reviewed ten of the -- ten of the
2 software licenses that are of the form that Newegg would
3 have entered into. Not the commerce service provider
4 licenses, I set those aside because those involved
5 companies like AT&T and MCI at the time, which are very
6 much unlike Newegg.

7 And I focused more on the vendor-type of
8 licenses that are -- the licensees in those transactions
9 are more like Newegg. In fact, that's what Mr. Ghosh
10 said is that that's the type of license that Newegg
11 would enter into.

12 Q All right. In fact, the Ladies and Gentlemen,
13 of course, along with you and everyone else, heard Mr.
14 Ghosh's the testimony just prior to yours.

15 A Yes, sir.

16 Q Let's move through that very quickly.

17 A Okay.

18 Q That's quick enough.

19 A That's another graphical illustration of the
20 difference between Mr. Nawrocki's damages conclusion and
21 the largest of the up-front portions of those software
22 licenses for Transact.

23 His conclusion is \$34 million in damages. If
24 you look at those data points, the largest is about
25 \$344,000.

1 him?

2 A Yes, sir.

3 Q And with regard to this 25-percent rule of
4 thumb, is it a written rule that persons such as
5 yourself must abide by?

6 A Oh, no, sir. As I said, it's very
7 controversial. And in my practice I do not use it. I
8 tend to do other calculations as we've shown here.
9 If I'm ever going to use it, I will apply it just to the
10 portion of profits that are attributable to the
11 invention, and certainly not to everything. And
12 that's -- that's a very significant criticism of the
13 rule in literature is that it's often misapplied, as
14 it's been misapplied here by Mr. Nawrocki.

15 Q All right. Have you prepared a summary slide
16 that brings all of this together based on the documents
17 that are in evidence and that you've reviewed?

18 A I have.

19 Q And this is Slide 23. And I'd like you to
20 tell the Ladies and Gentlemen of the Jury what it
21 depicts.

22 A Okay. These are each of the data points that
23 we described throughout my testimony. The first one
24 being what I call the benchmark rate or an apportionment
25 calculation.

1 And we will walk through exactly what the math
2 is one more time. It's a fraction of 1 percent, in
3 fact, a penny when applied to a hundred-dollar monitor.

4 When it's applied to the royalty base in this
5 case, the total of that calculation yields about
6 \$600,000. That's the bar that says benchmark with the
7 \$599,000 above it.

8 The second category is the total of lump sum
9 licenses that have been admitted into evidence, the
10 non-settlement agreements and they total \$200,000.

11 The third is the largest of the up-front
12 payments for Transact, and that is \$344,000.

13 And then Mr. Nawrocki's damages conclusion is
14 listed next to that. Again, with a broken axis because
15 there wasn't room to fit it on a graph.

16 Q All right. Now, have we covered your areas of
17 disagreement with Mr. Nawrocki?

18 A Yes, sir.

19 Q Let's move to your affirmative opinions.

20 Have you formed affirmative opinions in this
21 case?

22 A Yes, I have.

23 Q You've heard Mr. Nawrocki testify about a
24 hypothetical negotiation, right?

25 A That's right. And we agree upon the date.

1 Q And what else? Anything else that you
2 disagree with?

3 A Well, we disagree a little bit upon the
4 context. And I would like to spend a little bit more
5 time discussing that. That's what this slide is
6 intended to show.

7 These are two parties, Open Market and Newegg,
8 sitting down at a negotiating table. It's called a
9 hypothetical negotiation, but it's -- actually the
10 premise of this hypothetical negotiation, it's grounded
11 in economics and financial analysis.

12 And the intent is to measure what the parties
13 would have reasonably agreed upon in order for, in this
14 case, Newegg to have access to the patented technology.

15 So at this time, in January 2001, we discussed
16 how Open Market was in dire financial straits and had
17 not been successful in generating from its software that
18 embodied the patented invention. That's Open Market's
19 side of the table.

20 Then we heard testimony over the last day or
21 so about Newegg at that point in time being a licensee,
22 being a start-up. January 2001 is right when the
23 business started. At that point in time being of
24 limited financial resources, and hoping to grow its
25 business over time.

1 analytical framework of the Georgia-Pacific factors?

2 A I did. In fact, Mr. Nawrocki and I, I think
3 kind of view a lot of these factors in somewhat of a
4 common way. I think there's one factor that I have
5 listed as a technical factor that Mr. Nawrocki has as a
6 commercial factor.

7 I just want to point out one. It's GP Factor
8 13. And that relates to the portion of the profit that
9 should be credited to the patented invention.

10 Q And you feel that he didn't give proper
11 consideration?

12 A That's what I discussed, the portion word.
13 That's where the apportionment is derived (sic) from.

14 Q All right. Let's get to the bottom line. Do
15 you have an opinion, based on your background, training,
16 and experience, at what a reasonable royalty would be in
17 this case?

18 A Yes, sir, I do.

19 Q And what is that opinion?

20 A It's a lump sum payment of \$500,000.

21 Q And could you explain briefly how you got
22 there? And you don't have to repeat anything that
23 you've said.

24 A Well, I assessed the outcome of the
25 negotiation -- essentially what I did is I reviewed all

1 A And the license that we're valuating is the
2 U.S. license to the patents-in-suit.

3 Q Back in the time frame we've discussed that
4 are in evidence in this case?

5 A That's right. And the outcome of the
6 hypothetical negotiation would yield U.S.-only license
7 to the patents-in-suit.

8 Q All right. Would you tell us what is in Slide
9 26A very quickly, because I think we may have touched on
10 this?

11 A Okay. I mentioned in the prior slide how Open
12 Market's strategy was to broadly license its patents.
13 That actually comes from Defendant's Exhibit No. 269.

14 In fact, the quote is: Open Market strategy
15 from its business plans at the time was to broadly
16 license its patents so as not to slow the growth of
17 internet commerce and to use them as a defensive tool
18 against competitors.

19 Q All right. And in support of your own
20 affirmative opinion, did you consider the Open Market
21 and Divine patent licenses --

22 A I considered those things.

23 Q -- that are in evidence that we have already
24 discussed?

25 A Yes, sir. This is another slide that

1 contribution, we actually never got down that far. We
2 talked about some features of the website above and
3 beyond that, but I said, okay, that's going to have to
4 suffice for now.

5 So I took the .63 percent we're at now and
6 multiplied it by 8 percent. That leaves half of
7 1 percent.

8 Then to apportion that leftover benefit I used
9 just as a split-up I took 25 percent and gave it to Open
10 Market and 75 percent to Newegg.

11 Q All right. Now, this says accused sales times
12 benchmark, and it has almost 600,000. But what is your
13 opinion as to a reasonable royalty?

14 A It's \$500,000.

15 Q And explain the difference here.

16 A Well, there's other data points that are less
17 than \$500,000. And then I think as I walked through,
18 the assumptions that I made for each of these
19 calculations are conservative. And had I, in fact, used
20 1 or 2 percent, this calculation would have yielded,
21 gee, one-sixth, or \$100,000 instead of \$600,000.

22 Q Are your -- is your analysis based on hard
23 evidence?

24 A Oh, yes, sir.

25 Q Have you verified your facts and figures?

1 A Yes, sir.

2 Q Do you feel strongly about this opinion?

3 A I do.

4 Q And do you think that the amount that you
5 stated, less than 500,000, would be a reasonable royalty
6 in this case in total?

7 A Yes, sir.

8 MR. SAYLES: I'll pass the witness.

9 THE COURT: All right. Very well.

10 Let's see, we've been going for -- how
11 long do you think your cross will take, Counsel?

12 MR. SATINE: I would say about an hour,
13 Your Honor.

14 THE COURT: I think we'll take our break
15 before then and give y'all a chance to clear your heads
16 a little bit.

17 We will be in recess until 2:40.

18 COURT SECURITY OFFICER: All rise.

19 (Recess.)

20 (Jury out.)

21 COURT SECURITY OFFICER: All rise.

22 THE COURT: Please be seated.

23 All right. Before we bring the jury in,
24 I do have the Court's Charge for you to take a look at.

25 Ms. Ferguson, do you have copies there?

1 again.

2 Is a grocery cart necessary to the shopping
3 experience on Newegg? Yes or no.

4 A Well, your question doesn't --

5 Q You can't answer yes or no?

6 A A yes or no answer doesn't fit.

7 Q Okay.

8 A I'd like to answer it in detail, if I may.

9 Q Is a grocery cart necessary to shopping for
10 all that cereal for your kids? Yes or no.

11 A Oh, that's -- yes, sir, that's true.

12 Q You don't go in and buy one box of cereal, pay
13 for it, go out to your car; go in and buy another box of
14 cereal, pay for it, and go out to your car; go in, buy a
15 third box, pay for it, go out to your car. Right?

16 A That's an interesting point, because we've
17 heard testimony throughout this trial by technical
18 experts. I think Mr. Grimes said those situations
19 wouldn't infringe.

20 And, in fact, that represents about two-thirds
21 of the transactions that occur on Newegg's website,
22 situations like that.

23 Q Sir, did Dr. Grimes testify that you go into
24 the supermarket to buy cereal for your children -- that
25 was the question I asked, okay?

1 A Well, sure.

2 Q Okay.

3 A Absolutely.

4 Q It would want to have a stream of revenue
5 continuing, because Open Market wasn't closing its doors
6 yet. It didn't get purchased by Divine for some time,
7 right?

8 A Oh, no. That's contrary to my experience in
9 licensing. A company in the situation that Open Market
10 was in that needed cash would be more inclined to accept
11 or negotiate for an upfront payment in order to continue
12 to fund its business.

13 Q So, in your opinion, Open Market would have
14 said to themselves: Well, we're going to get acquired
15 in a few months by Divine, so instead of having Divine
16 pay \$70 million, we'll have them pay \$70,500,000? That
17 would have been what's going through Open Market's mind?

18 A No, sir. That's misleading. There was no
19 cash in that transaction, so that's not the way that the
20 parties would have evaluated it.

21 Q They received stock worth \$70 million, the
22 Open Market stock?

23 A Stock exchange. There was no cash.

24 Q But the stock was marketable, right? People
25 could sell it. It was traded on the New York Stock

1 At the hypothetical negotiation Newegg's only
2 option is to take a patent license, right?

3 A That's right.

4 Q At the hypothetical negotiation Newegg has no
5 option of saying, no, we're not taking a patent license;
6 we're going to purchase a software license to Transact
7 instead, right?

8 A The hypothetical negotiation values a patent
9 license. Other options in terms of software licenses
10 are certainly relevant considerations and would inform
11 the negotiation. But it involves a patent license.

12 Q Does that mean the answer to my question is
13 yes?

14 A Well, we got backwards with yes and no.
15 My answer to your question is that the hypothetical
16 negotiation involves the taking of the patent license.

17 Q Okay. So let's try to make sure we're all
18 talking about the same thing.

19 Since the hypothetical negotiation deals with
20 the taking of a patent license, one of the parties at
21 the hypothetical negotiation can't say: Nope, no patent
22 license for me, I'm going to buy the Transact software
23 license?

24 A Oh, I agree with that. That's correct.

25 Q Do you agree that TigerDirect.com is a website

1 which competes with Newegg?

2 A I believe so.

3 Q Do you believe that TigerDirect does not have
4 a software license to use Soverain's Transact software?

5 A Yes, I agree.

6 Q You agree that TigerDirect has a patent
7 license from Soverain?

8 A Yes, sir.

9 Q Do you agree that TigerDirect has a patent
10 license from Soverain to use the patents in this
11 lawsuit?

12 A Yes, sir.

13 Q Do you agree that Amazon.com is a website that
14 competes with newegg.com?

15 A In a limited sense, yes, sir.

16 Q In a limited sense.

17 Have you reviewed Newegg's S-1 filings with
18 the Securities and Exchange Commission of the United
19 States?

20 A I have. I believe Amazon is listed as a
21 competitor.

22 Q Okay. Amazon does not have a software license
23 to use Soverain's Transact software, correct?

24 A That's correct.

25 Q Amazon has a patent license from Soverain,

1 correct?

2 A Oh, yes, sir.

3 Q Amazon has a patent license from Soverain to
4 use the three patents in this lawsuit, correct?

5 A Yes.

6 Q Now, let's talk a little bit about patent
7 licenses.

8 You went through patent licenses that you
9 reviewed the patents-in-suit, right?

10 A Yes, sir.

11 Q And you told us that you excluded from your
12 valuation any patent licenses that resulted from the
13 settlement of the lawsuit, right?

14 A Yes. I made an effort to differentiate
15 between licenses that settled a lawsuit where a
16 complaint was filed.

17 Q Okay. So you used one of the two Open Market
18 agreements, right?

19 A Yes, sir.

20 Q You used 18 of the 32 Divine license
21 agreements, right?

22 A Yes, sir.

23 Q You used none of the Soverain granted license
24 agreements, right?

25 A That's correct.

1 Q So you didn't consider in the analysis on that
2 bar chart Amazon.com, right?

3 A That's right.

4 Q You didn't put Gap up there, right?

5 A I did not.

6 Q You didn't put Redcats up there, right?

7 A That's right.

8 Q Didn't put Zappos up there, right?

9 A Yes.

10 Q Didn't put TigerDirect up there?

11 A Yes, sir. I agree with that.

12 Q Now, you and Mr. Sayles did talk about the
13 Divine licenses and the one Open Market license to
14 Johnson & Johnson?

15 A We did.

16 Q Okay. And you compared Mr. Nawrocki's royalty
17 calculation to what you said were these real-world
18 patent licenses, right?

19 A Yes, sir.

20 Q Okay. Well, let's see if we can do a
21 comparison, also.

22 MR. SATINE: Your Honor, may I approach
23 and put something on the easel, if somebody can do that?

24 THE COURT: Yes, you may.

25 Q (By Mr. Sayles) Okay. You were here in the

1 for apportionment considers the sales during the damages
2 period, not during 2001. So just to be clear, when I
3 calculated damages in the apportionment calculation, I
4 used sales during the damages period, yet the result of
5 that calculation was \$600,000.

6 Q So when you did your apportionment analysis,
7 you thought it was reasonable to look at sales during
8 the damages period. But at the hypothetical
9 negotiation, it would have been unreasonable for Open
10 Market and Newegg to look at the sales during the
11 damages period? That's your testimony, right?

12 A Well, I don't -- I don't see how you can ask
13 that question given my prior answer. So maybe I should
14 try again.

15 Q Well, I guess that means you can't answer my
16 question, correct?

17 A No, I think I've answered your question.

18 Q Okay.

19 A I think it's very clear.

20 Q Let's look at another of your real-world
21 patent licenses.

22 Divine entered into a patent license with
23 Odimo, correct?

24 A Oh, yes, sir.

25 Q And the agreement with Odimo was that Odimo,

1 for each one of its 35,000 shopping cart transactions,
2 would pay a royalty which represented approximately 85
3 cents per transaction, right?

4 A During one year, a start-up year.

5 Q During one year?

6 A It's very important. In your questions, you
7 keep leaving that out. That's an important
8 consideration, critical, in fact, in those licenses.

9 Q So would it have been fair at the hypothetical
10 negotiation for the parties to say, let's look at the
11 number of transactions in 2008 and let's multiply that
12 by 85 cents per transaction to get another data point to
13 discuss? Would that have been fair?

14 A No, sir.

15 Q That wouldn't be fair.

16 Would it have been fair at this hypothetical
17 negotiation for the parties to say, let's look at the
18 number of transactions in 2009 and multiply that by 85
19 cents to get another data point? That's not fair?

20 A Sir, that's not how -- sir, that's not how
21 those licenses are structured. They're not -- they're
22 not a function of anticipated sales some eight or nine
23 years into the future. They're a function of one year
24 historical sales.

25 And the gross amount of those licenses I think

1 is also a relevant consideration. None of them come
2 anywhere near to the damages conclusion here. I mean,
3 the damages conclusion here, as I mentioned, is 165
4 times higher than all of those licenses if I add them up
5 in total.

6 Q And it's 165 times higher because we have such
7 a larger royalty base, right?

8 A A larger royalty base and a larger royalty
9 rate, that's for sure, absolutely.

10 Q Is 80 cents per transaction higher than 85
11 cents per transaction that Odimo paid?

12 A 1.20 is. That's 50 percent higher.

13 Q They were paying 85 cents per shopping cart
14 transaction. For the first two patents on that chart,
15 the rate is 80 cents. That is five cents less than
16 Odimo was paying, right?

17 A That math is correct. But which, again,
18 you're leaving out is that was for one year, a start-up
19 year. They didn't -- that license did not say, let's
20 look at what your sales maybe will be in 2010, and if
21 you're really successful as a business, we're going to
22 sock it to you. They don't say that.

23 Q Some of the Divine licenses were not for one
24 year, right?

25 A That's right. I think that's correct.

1 Q Some of them covered a period of several
2 years, right?

3 A Start-up years, that's right.

4 Q You and Mr. Sayles talked about a license
5 agreement that was for \$400, right?

6 A Yes, sir.

7 Q That was the license agreement that Divine
8 entered with a company by the name of LH Internet,
9 correct?

10 A I vaguely recall that.

11 Q And LH Internet agreed to pay Divine 2 percent
12 of its gross sales over the internet for one year,
13 right?

14 A That's what the license says.

15 Q Okay. But, again, your position is at the
16 hypothetical negotiation it would have been unreasonable
17 for Open Market to say, what's fair is fair. If you
18 want to point to these licenses and say they only paid
19 \$400 based on 2 percent of their gross sales, let's look
20 at 2 percent of your gross sales in the damages period.

21 A Yeah, that's unreasonable, sir. That's
22 unreasonable and it's misleading and it's inconsistent
23 with the licenses.

24 Q Let's put your Slide 13A back up on the
25 screen.

1 THE COURT: Counsel, let me ask about how
2 much longer you think you have on cross? We've been
3 going for about an hour now.

4 MR. SATINE: I'm sorry, Your Honor. I'm
5 going to try to wrap it up and I will move quickly.

6 THE COURT: Very well. Thank you.

7 Q (By Mr. Satine) Mr. Bakewell, if we look in
8 the column that says One-time Payment.

9 A Yes, sir.

10 Q Each and every one of the listings there
11 references a payment that represents a percentage of
12 gross sales or net sales or gross profit for a fee per
13 transaction, right?

14 A Again, because you keep leaving this off, it's
15 during a single year, and a start-up year. And it's
16 explicitly called out. That's very important.

17 Q Is the answer to my question yes?

18 A My answer is the answer that I gave to your
19 question, sir.

20 MR. SATINE: Your Honor, could I get a
21 yes or no from the witness?

22 THE COURT: You may answer yes or no,
23 then explain your answer.

24 THE WITNESS: Okay.

25 A Shall I answer your question again?

1 Q (By Mr. Satine) Yes, with a yes or no, and
2 then Your Honor said explain it.

3 A Yes. May I explain?

4 Q Your Honor said you can.

5 A The explanation is that each of these one-time
6 payments are capped. They're capped. They're capped by
7 the fact that they're only one year. And not only are
8 they only one year, they're one start-up year. These
9 are start-up-type businesses.

10 And, in addition to that, it's relevant to
11 consider what the gross dollar amount of those licenses
12 are as indicated in the last column.

13 Q Mr. Bakewell, each and every one of those
14 entries in the column that says One-time Payment
15 represents the extent of use of the patents, right?
16 They are tied to the extent of use, right?

17 A I think that conceptually I can agree with
18 you. I don't think that any of these licenses called
19 that out specifically. But presumably the payment is in
20 exchange for value for extent of use.

21 Q Would you agree that the royalty that should
22 be paid in this lawsuit, with the assumptions the
23 patents are valid, enforceable, and infringed, is a
24 royalty that should be commensurate with Newegg's level
25 of use of the inventions?

1 A Oh, that's a consideration, yes, sir.

2 Q Let's move on to your benchmark analysis,
3 which was your third theory, right?

4 MR. SATINE: Let's put up Slide 34.

5 Q (By Mr. Satine) Now, you have a starting point
6 of 100 percent there, right?

7 A That's right.

8 Q And if we wanted to plug in a number there,
9 because at the bottom you say you're multiplying
10 something by the benchmark; you're multiplying whatever
11 that hundred percent is by the benchmark, right?

12 A Yes, sir.

13 Q If we wanted to plug in the number there, what
14 we'd be looking at is Newegg's total accused sales
15 during the damages period, right?

16 A Yes.

17 Q So if we replaced accused sales with a number,
18 and we kept your benchmark of 0.0125 percent, what we'd
19 have up there would look like this I think --
20 \$4,794,540,093 times .0125 percent, right?

21 A Yes, sir.

22 Q That's if we put the numbers in.

23 A Yes, sir.

24 Q Now, you told us that you verified your facts
25 and figures, right?

1 MR. SATINE: Let's look at Slide 8.

2 Q (By Mr. Satine) Do you recall that I asked you
3 at your deposition whether the Newegg customers who
4 answered this survey had any other choices they could
5 pick when answering what they liked about Newegg, or
6 were those the only choices they were given? Remember
7 that?

8 A Oh, yes, I remember. And that's correct.

9 Q Those were the only choices they were given,
10 right?

11 A Yes, sir.

12 Q They didn't have a box they could check which
13 said they liked the shopping method system. That wasn't
14 one of the choice, right?

15 A Oh, no, it wasn't.

16 Q Let's take a look at Slide 6, your 21 factors.
17 There's no source at the bottom of that one, right? So
18 if we talked about what you put under each one, you said
19 you had source, hard evidence; no source, no hard
20 evidence, right?

21 A Oh, no, sir. That's -- I don't think that
22 that's an accurate thing to say. My sources for these
23 were analyst reports and writeups by third parties
24 regarding Newegg.

25 MR. SATINE: If you could just highlight

1 relates to audio playback.

2 To the extent that it is considered, I think
3 it would be relevant -- very relevant to know that the
4 total payments per year under that license were
5 approximately \$4,000.

6 Q All right. And you were asked some questions
7 about the sale of Open Market to -- to Divine.

8 Do you recall that?

9 A Yes, sir.

10 Q And I'll mention the figure again, \$70
11 million. What was that figure?

12 A The Plaintiffs seemed to like that amount.
13 That amount was the -- represented the entirety of the
14 business, all of its assets, employees, software,
15 customer lists. We heard Ms. Wolanyk talk about how
16 those were very valuable references, et cetera.

17 Q All right. And you said that there was no
18 cash involved in that transaction. Would you explain
19 what you meant by that?

20 A It was a stock-for-stock transaction. So when
21 Mr. Satine, in his question, implied somehow there would
22 be cash that would be flowing into the doors of Open
23 Market, I felt that it was misleading.

24 A stock-for-stock transaction is different
25 than somebody offering stock on the open marketplace to

1 receive a capital injection for the firm.

2 Q Was the business of Open Market in pretty bad
3 shape at the time that transaction took place?

4 A Well, I think the evidence is very clear by --
5 as shown by those charts.

6 MR. SAYLES: And is it possible to pull
7 up Mr. Ghosh's testimony at Page 66, Line 23 from the
8 transcript? If it's not readily available, tell me.

9 MS. JOHNSTON: What page?

10 MR. SAYLES: It's Page 66, Line 23.

11 Q (By Mr. Sayles) All right. This was played
12 for the jury, but I'm going to ask that the words on the
13 question at Line 23 be pulled up, and then we'll look at
14 the answer on Page 67, Line 1.

15 Is this what you were relying on when you said
16 that at the time of the sale, the business was in bad
17 shape, Mr. Ghosh's testimony?

18 A This is one of the pieces of information that
19 showed or demonstrated that to be a fact.

20 Q And because we're actually creating a record
21 here, the question was: What caused Open Market to be
22 sold to Divine?

23 And Mr. Ghosh's answer was: The business was
24 in pretty bad shape. The company was losing money and
25 did not have a huge cash balance, and the public markets

1 were not available to raise additional capital.

2 Is that some of the testimony you're relying
3 on?

4 A Yes, sir.

5 Q You were asked some questions about whether
6 Newegg could get up from the bargaining table under a
7 hypothetical negotiation, and I think you indicated that
8 they could not.

9 A That's right.

10 Q On the other hand, could Open Market say, I
11 don't like this, and could they get up and walk in a
12 hypothetical situation?

13 A No, sir. This -- this negotiation is between
14 prudent and willing business people.

15 Q All right. And then, finally, you mentioned
16 that there were some single-item transactions. Do you
17 recall that in the very early part of your
18 cross-examination?

19 A Yes, sir, I do.

20 Q And what do you mean by single-item
21 transactions?

22 A Well, my understanding is that that's when a
23 user may just put a single item into a shopping cart and
24 check out.

25 Q And did you see facts and data on how often

1 that occurs?

2 A It occurs about two-thirds of the time.

3 MR. SAYLES: I'll pass the witness.

4 Thank you.

5 THE COURT: All right. Anything further?

6 MR. SATINE: Very briefly, Your Honor.

7 THE COURT: All right.

8 RECROSS-EXAMINATION

9 BY MR. SATINE:

10 Q Mr. Bakewell, the MPEG license that Newegg
11 entered into is for a pool of patent licenses, correct?

12 A Yes, sir.

13 Q So a number of companies that have patent
14 licenses in that technology have pooled them together,
15 and Newegg has taken a patent license from that whole
16 group of companies for that one technology, right?

17 A That's correct, for that standard, that
18 technical standard.

19 Q You said you agree with Mr. Nawrocki that
20 Transact maintenance figures should not be considered.

21 A Yes, sir.

22 Q Mr. Nawrocki doesn't consider the cost of a
23 Transact software license as an alternative to a patent
24 license, does he?

25 A That's true.

1 I live in Pittsburgh, Pennsylvania, and I'm a faculty
2 member at Carnegie Mellon University in Pittsburgh.

3 Q Can you tell the jury something about yourself
4 in connection with -- tell them about your experience in
5 connection with computers?

6 A Oh.

7 Q Just summarize it for us.

8 A Yeah.

9 I was born in New York in 1947 to an
10 educational family. My father was the chairman of the
11 Physics Department at New York University. He
12 eventually became president of the New York Academy of
13 Sciences and the National Science Teachers Association.
14 So I was always around science and scientists.

15 When I was in high school, I took a city-wide
16 examination in New York City for high school students to
17 be allowed to attend Columbia University on Saturdays,
18 and I entered that Columbia science honors program, and
19 that was my first exposure to computers, was in 1962.
20 So 48 years ago.

21 And that got me fascinated with them for the
22 rest of my life.

23 And when I went to college, I wanted to major
24 in computers, but the field didn't exist at that time in
25 universities.

1 So I went to Princeton, like Mr. Tittel, and I
2 couldn't major in computers, so I majored in physics;
3 but I spent most of my time in the computer center.

4 And upon graduation, I got the dream job at
5 IBM. That's what all the computer guys wanted to do.
6 And I became a programmer for IBM Corporation from 1968
7 till 1970.

8 During that time, I attended Vassar College,
9 which was physically right near where IBM was. I met my
10 wife there, and we've been together 42 years.

11 I got a master's degree in physics from Vassar
12 College, but I was still a programmer at IBM.

13 That was during Vietnam wartime. I had a very
14 low draft lottery number, so I had to go. And I served
15 in the United States Public Health Service from 1970 to
16 1972 as a commissioned officer.

17 I was stationed at the National Institutes of
18 Health in Bethesda, Maryland, and I worked for the
19 National Cancer Institute. I was response -- my title
20 was supervisory programmer. I was responsible for
21 running a very large data processing center that
22 processed cancer chemotherapy data.

23 When my service ended in 1972, finally, there
24 was such a thing as a field of computer science. Yale
25 University had just started a graduate program, and I

1 applied and was admitted to Yale, and I spent three
2 years at Yale in pursuit of a Ph.D.

3 Upon graduation, then in 19 -- well, when I
4 left Yale in 1975, I was hired as an assistant professor
5 at Carnegie Mellon University in Pittsburgh, which at
6 the time was the number-one ranked graduate school in
7 computer science in the country, and today is the
8 number-one ranked graduate school of computer science.

9 One of my responsibilities at CMU was to
10 organize and staff the introductory program courses. I
11 was always referred to as the introductory programming
12 czar. And I did that, and I taught introductory
13 programming, as well as -- as well as graduate courses.

14 And I was with -- I've been continuously
15 associated with Carnegie Mellon University since 1975.

16 I took -- I changed my status from full-time
17 to adjunct for quite a period of time, so I could pursue
18 some other things, one of which was I ran -- started and
19 ran a couple of software companies in Pittsburgh,
20 Pennsylvania, based on technology that had been
21 developed at the university.

22 I also attended law school after I got my
23 Ph.D. from Yale. I practiced as a lawyer also in
24 Pittsburgh, and I became a patent attorney, actually.

25 One of my specialties is electronic voting.

1 I've been an examiner -- an official examiner of
2 electronic voting systems for Pennsylvania since the
3 year 1980, and I performed that function for the
4 Attorney General of Texas for 13 years, from 1987 until
5 the year -- until the year 2000.

6 I returned to Carnegie Mellon full-time in
7 1998 to start what they called at the time the Institute
8 for Electronic Commerce.

9 This was a time when the internet boom was in
10 full swing, and the university realized that it wasn't
11 really producing any graduates who were qualified to
12 work in E-commerce businesses. The business students
13 didn't know enough technology, and the computer science
14 students didn't know enough business.

15 So they set up a program that I was
16 co-director of. I was the -- it was a joint venture
17 between our business school and the school of computer
18 science. I was the co-director from the computer
19 science side, and my responsibility was to design and
20 staff the technology side of that program.

21 Our deal with the business school ended in
22 2004, and the school of computer science took over the
23 entire thing, and now I am the sole director of graduate
24 programs in electronic business at Carnegie Mellon
25 University.

1 closed and was opened only to people who were members?

2 A I think Mr. Trevor testified that the people
3 who paid money to access CompuServe were referred to as
4 members, and you couldn't access CompuServe unless you
5 were a member.

6 Q Do you have a slide on that?

7 A Yes.

8 Q Okay. That's your -- that slide illustrates
9 that concept?

10 A I think it shows that members are able to
11 connect to CompuServe; and the nonmember suffering with
12 a big red X there, he's unable to get access to
13 CompuServe.

14 Q Now, was there -- as a result of the
15 communications going over a telephone line, was there --
16 does CompuServe know what activities each user was
17 doing?

18 A Yes. During this telephone conversation,
19 there is a one-to-one connection between the user's
20 terminal and the CompuServe computer. So, anything that
21 CompuServe sent you, it knew what it had sent you. And
22 anything that you sent back, by way of characters over
23 the telephone line, it knew from whom they were coming.

24 Q Go to the next slide, I think that's shown.

25 A Yes. So, for example, here I think there was

1 testimony about this -- this particular screen in which
2 you were supposed to press O on your keyboard if you
3 would like the purchase the item that's currently being
4 displayed.

5 So what's being displayed here is the book
6 Moby Dick, and if you press O to purchase, then what
7 happens is that message, and every message that you send
8 to CompuServe, comes in over that telephone line.

9 And so here, if you actually want to purchase
10 the book and you hit the O key, then the letter O is
11 sent to the CompuServe mainframe. I think Mr. Trevor
12 testified it was actually the letter O followed by the
13 carriage return character. Those two characters would
14 be sent to the CompuServe mainframe, and it knew that
15 you wanted to order Moby Dick, not because you said that
16 in the message, but because it had previously sent you a
17 screen that said Moby Dick.

18 Q Some of the claims in this case involve
19 product identifiers; is that correct?

20 A That's right.

21 Q And does that relate to this discussion that
22 we're having about CompuServe, the need or the lack of
23 need for product identifiers?

24 A Yes. I think the claims refer to shopping
25 cart messages which are compelled to include product

1 identifiers.

2 Q Were there such product identifiers in
3 CompuServe?

4 A No. Mr. Trevor testified that it didn't need
5 them. And that's consistent with my understanding. It
6 didn't need them. If it needed them, then this would
7 never work because O does not identify Moby Dick.

8 Q Did Mr. Tittel refer to the product
9 identifiers in his testimony?

10 A No. He kind of skipped over those claim
11 limitations that had product identifiers in them.

12 Q But Mr. Trevor said they weren't there.

13 A That's right.

14 Q Let's go to the next slide.

15 Okay. This is a slide on product identifiers?

16 A Yes. This is another slide on product
17 identifiers for the later system that had this WINCIM
18 software that would turn a PC into the equivalent of a
19 client terminal.

20 And the interface there was slightly
21 different. You didn't hit O. You had to hit -- hit
22 this order key, which is where the little arrow on the
23 left-hand picture is shown.

24 And when you hit the order key, some message
25 went across, I think the exact format of it was not

1 testified to. But it didn't have a product identifier;
2 it was just an indication that the order key had been --
3 had been hit at that time.

4 Q Was this point overlooked also in Mr. Tittel's
5 the testimony?

6 A He never talked about product identifiers.

7 Q So this is something that was missing from the
8 CompuServe Mall, the CompuServe Electronic Mall, the
9 product identifiers that are included in some of the
10 claims?

11 A That's correct. There was no need for product
12 identifiers, and it didn't have them.

13 Q So let's skip ahead to -- I think you have a
14 slide on the -- on one of the CompuServe references that
15 Mr. Tittel was testifying about.

16 Does this relate to the Bowen and Peyton
17 reference that Mr. Tittel and Mr. Trevor testified
18 about?

19 A Well, that's what this -- this screen is
20 about -- I mean, the title -- the title of the slide, is
21 that he improperly combines four different CompuServe
22 references. So he was trying to show that CompuServe
23 anticipated some of these claims.

24 And CompuServe, as a system, existed in
25 various different versions at various different times.

1 Mr. Trevor testified to that. And these books that
2 Mr. Tittel relied on were also published at different
3 times, and they describe different versions of the
4 system.

5 Yet when he was trying to show that CompuServe
6 matched up, I think in his words, matched up with the
7 claims, he would pick and choose various quotations from
8 these different books that were written in different
9 years, and obviously, as I'll show, don't even describe
10 the same version of CompuServe.

11 Q The Bowen and Peyton 1989 book represented a
12 very early version of the electronic mall where menus
13 were used; is that right?

14 A Yes. This is the pre-WINCIM version, what I
15 think what was referred to as the ASCII version. ASCII,
16 all that means is you only have the ability to send
17 characters. You can't send graphics, for example.

18 Q And what version of CompuServe Mall did the
19 later books, the Campbell book and Ellsworth book,
20 describe?

21 A Campbell and Ellsworth clearly describe the
22 versions of CompuServe with WINCIM because you can see
23 the illustrations in the books have -- they show the
24 WINCIM interface.

25 Q And in his analysis, did Mr. Tittel combine

1 those two versions?

2 A Well, I think the implication is he combined
3 them, but what he really did was to pick and choose from
4 the various ones. When he wanted to show a particular
5 claim element was in CompuServe, he seemed to pick the
6 book that was convenient for that purpose.

7 Q And why, in your opinion, is that wrong?

8 A It's not actually my opinion. It's -- the
9 nature of anticipation is you have to be able to find
10 all of the claim elements in the same single reference.
11 And those four books are four different references.

12 Q Can go to the next slide, please.

13 A Yes.

14 Q And what does this slide relate to?

15 A Well, there was a video that was presented by
16 Mr. Trevor that showed this -- this version that had the
17 order button. And, again, that video is like a fourth
18 reference. The video is not any one of the three books.
19 And there's no -- there was no testimony as to the --
20 the version of CompuServe that that represented, the
21 date on which that version of CompuServe existed, nor
22 any of that.

23 Q Now, in Mr. Tittel's presentation, I think it
24 was clear that the -- that CompuServe was not on the
25 worldwide web in the 1994 time period; is that true?

1 A He definitely testified that it was not on the
2 worldwide web.

3 Q Okay. And -- and do you -- do you have an
4 opinion as to what it would have taken to take
5 CompuServe and move it to the internet in that time
6 period, to the worldwide web?

7 A Yes. The natural thing might have been to
8 say, well, there's this internet that is coming along;
9 it seems to be very important. Let's put our
10 system on -- on the internet.

11 The problem is that the architecture of the
12 CompuServe system didn't permit that to be done readily
13 because for these little O characters that are coming
14 that say order, order, order.

15 On the internet, because all of the -- the
16 communications from all the different users and these
17 client terminals over here around the edge, all of
18 these, those are different users, and they may be all
19 over the world. And all of them are sending Os along
20 this line. And the CompuServe server is not able to
21 keep straight whose O is which. It doesn't know --
22 because of the stateless nature of the internet, it
23 didn't know what the last thing it was that it sent to a
24 particular client terminal. So when the O comes back,
25 it wouldn't know what that particular person wanted to

1 order.

2 Now, of course, ultimately this problem was
3 solved. But it wasn't a simple matter of let's just
4 take all of our existing networking and let's replace it
5 with the internet. If they did that, it just wouldn't
6 work.

7 Q Now, there was some discussion about TELNET in
8 both Trevor's testimony and Tittel's.

9 A Yes.

10 Q And they said that in 1994 CompuServe was
11 available through TELNET.

12 A Yes.

13 Q Is that the same thing as the worldwide web?

14 A No. In fact, I can probably use this drawing
15 to explain exactly what TELNET is.

16 TELNET was an extremely early ARPANET
17 protocol. It existed in 1975. If you were a node on
18 the network, and you wanted to establish a kind of
19 telephone connection between yourself and another node
20 on the network, you could do that by saying, TELNET, and
21 then you would give the name of the place you wanted to
22 connect to.

23 So if I happened to be at Yale, I could just
24 go to my terminal and type TELNET CMU, and that would
25 connect me to Carnegie Mellon University. And it was as

1 if my terminal happened to be sitting in the computer
2 room at Carnegie Mellon University. It was effectively
3 my transporting myself there.

4 So even that went over the internet, what
5 happened is -- let's suppose that this -- this node over
6 here is Yale, and this node down here is Carnegie
7 Mellon. When you ask for a TELNET connection, what
8 happened is these various of these lines -- I'm not sure
9 I'm getting all these arrows -- would be dedicated to a
10 connection between the two universities. And it would
11 be effectively like a telephone line even though it
12 wasn't over the telephone network.

13 Q And that's not what happens in the worldwide
14 web, is it?

15 A No. The worldwide web doesn't have
16 dedicated -- it's referred to as connectionless. It
17 doesn't have dedicated connections of that kind.

18 Q Can we go to the next slide, please?

19 A Well, this is just an explanation of why it
20 wouldn't have been obvious how to move CompuServe to the
21 web. If I just took all the CompuServe software and I
22 replaced the interface, the network interface to an
23 internet interface, the system would completely
24 collapse, and you wouldn't be able to order a single
25 thing on it.

1 button. And, again, the only thing that goes is an O,
2 or the equivalent of an O.

3 Q So at the point that you hit that order
4 button, the product's already been identified?

5 A Yes. Again, CompuServe didn't need to know
6 because, when you asked for select, it knew what product
7 you were interested in. And if you then later hit
8 order, it knew that was the one that you were -- that
9 you wanted to buy.

10 Q Could you skip ahead a couple of slides to the
11 first slide on database issue?

12 A Yes.

13 Q Okay. Now, one of the things that we've been
14 discussing, the issues we've been discussing in these
15 patent claims, is the shopping cart database.

16 A Yes.

17 Q You see that?

18 And in Mr. Tittel's testimony he identified
19 the shopping cart database in the CompuServe Electronic
20 Mall as the shopping cart -- excuse me, the personal
21 holding file that was referred to in one of the books as
22 the shopping cart, and the file that's related to that
23 as shopping cart database.

24 A Yes.

25 Q Have you put the Court's construction of the

1 term shopping cart database on this slide?

2 A That's right.

3 Q Okay. And how is that relevant to this
4 discussion?

5 A Well, it's relevant to this notion of exactly
6 what the personal holding file was. And I knew that
7 there was a personal -- something called a personal
8 holding file because it's described in the CompuServe
9 books. But I didn't actually know until I heard
10 Mr. Trevor's testimony as to exactly what was meant by
11 the personal holding file. And it's different from what
12 I thought it was.

13 Q And what was your recollection of his
14 testimony?

15 A Oh, he testified that it was information held
16 in main memory of the computer. It was never even
17 written to a disk file.

18 Q So do you disagree with Mr. Tittel's testimony
19 that there was a database in -- in the CompuServe
20 Electronic Mall that handled the products that are
21 ordered?

22 A I don't know whether there was a database, and
23 I don't think Mr. Tittel knows whether there was a
24 database or not. It's his obligation to show that there
25 was one, and he didn't.

1 Q How does Mr. Trevor's testimony bear on this?

2 A Well, because if all these -- these pieces of
3 information are being held in main memory of the
4 computer, that's not a database.

5 Q Let's take a look at your next slide.

6 Mr. Tittel was suggesting, I believe, that a person
7 looking at these books, the three books that we've been
8 testifying, or you've been testifying about, that that
9 person looking at those books would say that there's a
10 database, and they would actually know how to build one.

11 Do you agree with that?

12 A Okay. Well, I don't think it's necessarily
13 true that there had to be a database there. I think
14 it's possible there might have been. It might have been
15 a reasonable design choice, but it certainly wasn't
16 required.

17 If somebody looked at those books and said,
18 well, I'd like to build this system and I'd like it to
19 have a database, I don't think they could sit down and
20 do that in a straightforward fashion. They might
21 eventually come up with it after -- after a lot of work.
22 They wouldn't be directed by that to put a database in.

23 Q Do you think that these three books inherently
24 disclose a database?

25 A Well, inherently has a special meaning with

1 respect -- with respect to patents.

2 Q Would you say that they necessarily --

3 A No.

4 Q -- disclose a database?

5 A They definitely don't necessarily disclose a
6 database because there are ways of implementing the
7 system that doesn't require a database.

8 Q What would be an example?

9 A Well, an example would be that, after you've
10 made your selection of products, instead of actually
11 storing it in a database, it sends it off to a
12 fulfillment house, which would then fill your order and
13 send it to you without ever recording it in a database.
14 That's one way.

15 Q Okay. And that would be an alternative to a
16 database?

17 A Yeah.

18 Q Let's go to the next slide, if you will.

19 A Yes. This is just a list of the elements that
20 Mr. Tittel did not show were present in Claims 35, 51,
21 and 17.

22 Q The X that you put on this slide indicates
23 that you did not believe that there was sufficient
24 evidence, or that Mr. Tittel had provided evidence --

25 A Okay.

1 I think what he said was that basically URLs
2 are common on the internet. But that doesn't say that
3 you have to have a shopping cart message with one or
4 that you have to have a payment message with one.

5 Q You've indicated the absence of those things
6 in CompuServe with the Xs?

7 A Well, they are certainly not in CompuServe.
8 And the question is: Would they be in CompuServe plus
9 the internet? The problem is there was no shopping cart
10 message anyway in CompuServe plus the internet. So it
11 wouldn't have a URL if it didn't exist.

12 Q Okay. Let's go to the -- that completes your
13 analysis on the sales system claims, the shopping cart
14 claims?

15 A Yes.

16 Q So let's now turn to the claims that are
17 involved in the hypertext statements. And those are 41
18 and 61 of the '492.

19 What's your conclusion on that?

20 A Well --

21 Q And whether those were present in the
22 CompuServe Mall.

23 A I think the content of most of those claims is
24 not disclosed by the references that -- that Mr. Tittel
25 discussed. I think the way he handled it was he put a

1 claim limitation up on the screen, and then flashed some
2 kind of quotation from some reference next to it, and
3 then quickly put a checkmark next to the element showing
4 that it -- he believed it was present. But if you
5 actually read the quotations that he put up there, they
6 don't show that.

7 So, for example, in -- in CompuServe, the way
8 in which you checked the status of an order was you
9 would have to call up the merchant on the telephone and
10 ask the merchant, Where's my order?

11 Another alternative was you could send an
12 e-mail message to the merchant through CompuServe, and
13 then the merchant would go through some process to look
14 up your status and then send you an e-mail back
15 indicating what your status was. That is not close to
16 what is claimed in the hypertext -- in those hypertext
17 claims.

18 Q In the hypertext claims, there's a need for a
19 hypertext for a transaction statement; is that true?

20 A There has to be --

21 Q Transaction --

22 A Yes. There has to be a transaction statement,
23 and then there are transaction detail hyperlinks.

24 Q Right. And none of those were present in
25 CompuServe?

1 A Not close.

2 Q Would you go to the next slide, please?

3 A Yes.

4 Yes. This shows what the intention of the
5 claim in '492 is, that you ought to be able, sitting at
6 your computer, to -- by clicking and typing things, you
7 ought to be able to do a status inquiry and the server
8 computer ought to be responding to your status inquiry.
9 There's no human intervention; there's no calling up
10 anybody on the telephone.

11 Q All right. Let's go to the next slide.

12 Does this relate to that same thing?

13 A Yes. It's the same things. This is the '492
14 hypertext claims that we're talking about.

15 CompuServe didn't have a statement document,
16 and it didn't have a transaction detail document. And
17 so even adding the internet to it doesn't give you a
18 statement document or a transaction detail document.

19 Q So what did Mr. Tittel point to in discussing
20 these claims?

21 A I think he talked about his bank statement or
22 something like that. But bank statements aren't
23 disclosed in the internet or in the CompuServe
24 references.

25 Q So --

1 A So here there are basically three steps that
2 appear in those claims.

3 One is you have to transmit a statement
4 document comprising the purchase transaction records.
5 Now purchase transactions are things that you've already
6 purchased. So if I've made five purchases from Amazon,
7 I'd like to be able to go back and review my five
8 purchases, maybe learn their status, when are they
9 coming, et cetera, cancel an order if it hasn't been
10 filled yet. So a statement document is one that shows
11 all of my -- all of my pending orders. That's nowhere
12 in CompuServe.

13 Then on that statement there has to be a
14 transaction detail hypertext link. This is something
15 which, if you click on it, you will get details of that
16 particular of the five transactions.

17 Well, okay, not only was there no statement
18 document, but let's even forget about the internet.
19 There wasn't any kind of way on CompuServe of obtaining
20 that kind of information.

21 So if you took CompuServe and added the
22 internet to it, you wouldn't get the transaction detail
23 hypertext link.

24 Then you had to be able to activate -- the
25 user had to be able to activate that link, and that

1 store. And the arrow is pointing to what we refer to as
2 an abandoned shopping cart. Apparently somebody put
3 some items in it and they left the store without buying
4 anything.

5 And so selecting products that you might
6 purchase, or you might never purchase, that's not a
7 purchase transaction. It becomes a purchase transaction
8 when you go to the cash register and buy the stuff.

9 Q Okay. Have you summarized your analysis of
10 these claims -- '492, Claims 41 and 61, in your next
11 slide?

12 A Yes. And there's more missing from those.

13 So let's even assume we could take CompuServe
14 and somehow combine it with the internet. Then these
15 elements of the hypertext claims are all missing. We
16 don't have the required database. There's no statement
17 document; there's no hypertext link to be activated; and
18 no transaction detail document comes.

19 Q Does that complete your analysis of the
20 hypertext statement claims?

21 A Yes -- no.

22 Q Well, no.

23 A It doesn't.

24 Q It doesn't.

25 A Wow.

1 Q There's one more, 41 and 61.

2 A Yes, there are even more.

3 Yes. The server computer doesn't send the
4 statement in response to a statement URL because there's
5 no statement and there's no statement URL.

6 And there was another claim that required you
7 to be able to ask for transactions that took place in a
8 given month. CompuServe couldn't do that. And since
9 there was no statement document, it couldn't include any
10 of the things that are listed down on the bottom line
11 there, the date of the transaction, et cetera.

12 Q So you put big Xs in all of those.

13 A Right.

14 Q So now let's go to the last of our three
15 patents, the '639.

16 This is the session ID technology; is that
17 right?

18 A That's right.

19 Q All right. Can you just briefly review the
20 issues of state and session?

21 A Yeah, I will be very brief.

22 Q Very brief. We've heard a lot about it, but I
23 think it would be --

24 A Right. So I think a good example the jury can
25 probably relate to is, consider a trial. Various events

1 that's a complete task. And so that whole thing is an
2 example of one session.

3 It's also possible to have multiple tasks. So
4 you might finish task one, then you want to continue on
5 in the same session and accomplish another task. And
6 then many, many, many tasks.

7 And all of that together can be one session
8 under the Court's construction, either of those
9 possibilities, the single-task session or the
10 multiple-task session.

11 And the question is how to maintain session
12 state. How do you know when the sessions begin and the
13 sessions end?

14 And I think there were various proposals by
15 Mr. Tittel that this was known somehow in the prior art.
16 But, as I said, maintaining state doesn't automatically
17 maintain a session.

18 So there are some websites that are kind to
19 people who speak foreign languages. They remember that,
20 whenever you visit the site, you would like to interact
21 with the site in French. Well, that extends over many,
22 many, many sessions. That fact is not -- that state is
23 not a session identifier.

24 And, in fact, Mr. Tittel didn't identify any
25 single prior art reference that disclosed session

1 maintenance at all.

2 Q Mr. Tittel pointed to a Johnson reference. Do
3 you recall that?

4 A Yes.

5 Q Now, was that a state -- did that reference
6 have a session identifier?

7 A No. I'm spacing forward.

8 Q What did Johnson have?

9 A First we have to understand what a session
10 identifier is.

11 Q Yes.

12 A The Court's construction -- or the agreed
13 construction, I forget -- is a text string that
14 identifies a session.

15 Q Would that apply to Johnson?

16 A So it has to be a text string and it has to
17 identify a session. It doesn't apply to Johnson because
18 Johnson's credential identifier could either extend over
19 many, many different sessions, or it could stop being
20 effective in the middle of a session. It didn't
21 identify a session.

22 Likewise, user identifiers, like user names,
23 don't identify a session; they identify a user. A
24 credential identifier doesn't identify a session; it
25 just says this person is allowed to access these certain

1 pieces of information.

2 So something that changes during a session
3 clearly doesn't identify the session. And something
4 that can expire or go out of business during the session
5 doesn't identify it. And something that extends over
6 many sessions doesn't identify a session.

7 Q Mr. Tittel also referred to a Gifford patent
8 in connection with his discussion of session IDs. Does
9 that patent disclose a session ID?

10 A I think that the use of the Gifford reference
11 was to add the internet and hypertext to the Johnson
12 reference, which I think he acknowledged does not
13 disclose the internet or hyperlinks. So the idea is --
14 I think he combined Gifford with Johnson to get this
15 over to the internet.

16 But what you're getting over to the internet
17 didn't have session identifiers in the first place. So
18 you don't get session identifiers just by adding the
19 internet into things. In fact, it makes it worse.
20 Because the Johnson reference was in closed systems
21 where the server knew who you were.

22 When you all of a sudden go to the open system
23 of the internet, you can't just take Johnson and put it
24 on the internet. In fact, to my knowledge, Johnson has
25 never been put on the internet.

1 Q One of the claims, Claim 60, requires a user
2 identifier.

3 A Yes.

4 Q Was there any discussion of that in
5 Mr. Tittel's testimony?

6 A Yes. So Claim 60 requires the purchase
7 request including an associated user identifier. But if
8 you look back to the quotation that Mr. Tittel put up at
9 that time he was discussing this claim, there was
10 absolutely nothing whatsoever about a user identifier in
11 a purchase request.

12 And you don't even have to have a identifier
13 in a purchase request. Because if you know -- if you
14 have a session maintenance mechanism, and you know that
15 the purchase request is part of this session, then for
16 the user to identify himself at any point in the session
17 would be sufficient. So it doesn't have to be in the
18 purchase request.

19 Q Now, do you have a slide that summarizes your
20 analysis of the session management claims in the '639
21 patent?

22 A Yes. I just wanted to make sure there
23 weren't two slides. So when you ask me if I'm done, I
24 will give you the correct answer.

25 Q I think there's just one this time.

1 A There's one slide, yes.

2 So Claim 60 has all four of these limitations.
3 Even taking Johnson, which is this credential identifier
4 patent, and somehow adding the internet into it, you
5 still don't get a session identifier. You don't get
6 appending the identifier, which doesn't exist, to each
7 of the subsequent requests.

8 The purchase request is no disclosure of any
9 purchase request having any user identifier. And since
10 there's no user identifier, you can't access -- on
11 receipt of the purchase request, you can't go and access
12 the user information.

13 So none of those -- none of those elements are
14 even in the combination of the Johnson and Gifford.

15 Q Okay. Now, there has been some discussion in
16 the testimony in the case of basic authentication. I
17 believe it came up with Mr. Treese and maybe others.

18 A Yes. I think I had a slide earlier on that.

19 Q Does that have any relationship to this
20 discussion of identifying sessions? In other words, can
21 basic authentication identify sessions?

22 A No. It was recognized that authentication was
23 needed, because a lot of worldwide websites wanted to
24 sell content to people.

25 The New York Times, for example, didn't give

1 understanding is that the law requires such additional
2 considerations to be considered if they exist. And they
3 do exist in this case.

4 Q And did Mr. Tittel factor this into his
5 analysis?

6 A No, not at all.

7 Q Give some examples of these additional
8 considerations that should be looked at.

9 A Yes. So one example is praise by others or
10 professional acclaim.

11 If somebody does something that's very trivial
12 and obvious, it's unlikely that people are going to
13 praise them for it. So if you praise somebody, it means
14 they did something significant.

15 Failure of others. So if you're going to
16 argue that an invention is obvious, and 20 different
17 people tried to make it and they couldn't, that's very
18 strong evidence that it wasn't obvious, even if it
19 happens to occur in some arbitrary combination of
20 references that you might put together.

21 Likewise, commercial success. If I can make a
22 lot of money by making this invention; and it's obvious
23 to make that invention, then lots of other people are
24 going to do it, too, because we can rely on human beings
25 to want to make money. And that's the theory behind the

1 commercial success factor.

2 And then commercial acquiescence, the
3 licensing of things to others. If something is obvious
4 and easy to make, I'm not going to pay you for it. I'm
5 going to have my own guys do it themselves.

6 And so these are -- this is the reasoning
7 behind these -- these additional considerations of
8 non-obviousness.

9 Q And did you take -- did you find any or are
10 you aware of any praise by others --

11 A Yes.

12 Q -- in connection with the Soverain patents and
13 their inventions?

14 A Yes. The technology of Open Market at the
15 time and the importance of the patents was recognized in
16 articles in the New York Times and the Wall Street
17 Journal.

18 And the Transact product itself, which
19 embodies, it says, Soverain's inventions -- which means
20 they're now owned by Soverain, but it was Open Market's
21 inventions -- received industry praise, and they
22 received an internet excellence award presented by
23 NetWorld, NetWorld Interop.

24 Q Is there anything in Mr. Tittel's book about
25 Transact?

1 A Yes. Mr. Tittel himself praised Open Market.

2 And I don't think he specifically mentioned Transact.

3 Q You're right.

4 A And these are quotations from one of

5 Mr. Tittel's books. Open Market is a leader in

6 electronic commerce products since early 1995 -- 1994.

7 But we know what that product is. It's

8 Transact.

9 Open Market's software solution is regarded as

10 one of the most viable for businesses wanting to

11 establish an online commerce presence, and Open Market

12 software, quote, functions with all types of browsers,

13 all varieties of payment types, and all security

14 protocol formats.

15 Q That's right out of Mr. Tittel's writings?

16 A Yes. The quotation marks are his.

17 Q What about commercial success? Are you aware

18 of any commercial success?

19 A I've heard testimony and seen documents that

20 there were a huge number of licensees, more than a

21 thousand licensees of Transact.

22 I think we heard testimony that it occupied

23 something like 30 percent of the market for such

24 software. And some of these large corporations that are

25 listed there were licensees.

1 Q What about license -- what about patent
2 licenses?

3 A Well, my understanding was, there was -- there
4 was patent a license. I don't think I've listed that.

5 Q I think we have the next --

6 MR. GIANNETTI: If you'll go to the next
7 slide.

8 A Ah, yes. These are companies that have
9 licensed Soverain's patented technology.

10 Q (By Mr. Giannetti) Now, I think another factor
11 that you mentioned was failure of others?

12 A Yes, and I think that's extremely significant
13 here.

14 Q Can you elaborate on that?

15 A Yeah.

16 It was known early on -- when the http was
17 being developed, there was really great debate -- and a
18 lot of this debate is available publicly, because that's
19 one great thing about the internet, is this worldwide
20 communication medium.

21 And when people are doing things on the
22 internet, they make a record of it on the internet. And
23 so we have lots of bulletin boards and e-mail forums and
24 exchanges where technical people were debating back and
25 forth, should http have state or shouldn't it have

1 state?

2 And there were advantages and disadvantages.

3 And eventually, the decision was made in http 1.0 to not
4 have state. Everybody knew that that was going to
5 create problems, and lots of people went off attempting
6 to solve the problem of how can we add state to http.

7 And the first viable solution that I know of
8 was in the '639 patent. It's the session identifier.
9 So many people tried, but the inventors here were the
10 first ones to actually find a solution.

11 Q I think we've reached your final slide,
12 Professor.

13 A All right.

14 Q The bottom line.

15 A Bottom line, that Mr. Tittel and Newegg and
16 all its witnesses haven't shown that any asserted claim
17 is anticipated, and likewise, they haven't shown that
18 any asserted claim is obvious.

19 Q And those are your opinions in this case?

20 A They are.

21 MR. GIANNETTI: Nothing further. Pass
22 the witness.

23 THE COURT: All right.

24 MR. SAYLES: May it please the Court.

25 THE COURT: Yes.

1 started to try to opine, and you remember there was a
2 sustained objection on -- on obviousness.

3 THE COURT: Well, before we argue it, is
4 there any objection to that?

5 MS. FROST: Yes, Your Honor.

6 THE COURT: Okay.

7 MS. FROST: We believe there's an
8 obviousness issue that should go to the jury or should
9 be granted in our favor as a matter of law, which brings
10 me to my JMOLs, which are being electronically filed
11 right now, and I'm going to be handing them up to Your
12 Honor in just a moment.

13 THE COURT: Okay. So you object to the
14 obviousness?

15 MS. FROST: Yes, I do.

16 THE COURT: Okay. What -- what evidence
17 are you relying on for obviousness?

18 MS. FROST: The evidence of Mr. Tittel.
19 And if I may go to my desk --

20 THE COURT: Didn't they ask him on
21 deposition that he was not going to the express any
22 opinions on that, and did he not -- they objected, and
23 so, therefore, they didn't waive it, and he did not
24 express any opinions, as I recall, on obviousness?

25 MR. GIANNETTI: That's right, Your Honor.

1 He didn't at his deposition.

2 THE COURT: Okay. I'm asking them. I
3 know you don't think he did.

4 MS. FROST: Your Honor, I may defer to my
5 co-counsel here for the details, since I wasn't present
6 at the deposition, but it's our view that you don't need
7 an expert witness necessarily to opine on obviousness in
8 a case like this and that the references themselves from
9 which the jury can make that conclusion are in evidence
10 and are before them, and that's sufficient.

11 MR. ADAMO: Your Honor, the law is just
12 dead set against that. The Federal Circuit has several
13 times specifically said that -- and this is a
14 complicated case. This is not trying to decide whether
15 we've got a can opener patent that's obvious here. This
16 is a complicated case.

17 The Circuit has been exceedingly clear
18 that you don't just get to take a couple of exhibits,
19 dump them into the jury box, stand up on final argument,
20 wing it, and get a verdict on it.

21 I've actually got a bench memo on exactly
22 this point that I could file later in the day, because
23 we were expecting something like this might happen. But
24 the Circuit is absolutely clear that in a case like
25 this, you need expert opinion testimony to get to the

1 jury, and they don't have it.

2 And when they tried today, there was --
3 it looked like, you know, an attempt on Mr. Tittel's
4 part to go to obviousness. Mr. Giannetti got up and
5 objected, and Your Honor sustained the objection, and
6 that was the end of it.

7 So there isn't enough evidence here to
8 get to the jury on obviousness. And there's no
9 testimony about a Graham analysis. Nothing even close.
10 So you want to call it Graham/KSR, I don't care what you
11 call it. There wasn't sufficient evidence here. There
12 wasn't even an attempt made to do it.

13 And I played that out in my -- it's in my
14 JMOL motion, but it also was my second reason and my
15 only other reason for objecting to the charge. There
16 isn't an obviousness case here for the jury to decide.

17 I mean, rigorously, it's a legal issue
18 under -- there are underlying -- excuse me --
19 incorporated underlying factual matters, and they
20 haven't put any evidence in on any of the underlying
21 factual matters.

22 And that's really the only fact issue in
23 an obviousness case, as Your Honor knows. KSR confirmed
24 obviousness is a legal issue. Anticipation is a fact
25 issue, but obviousness is a legal issue.

1 So the only thing that can go to the jury
2 are the underlying fact issues, and there's zero
3 evidence on any of the underlying fact materials and
4 ground. Zero. There's nothing for the jury to decide.

5 THE COURT: Any response?

6 MS. FROST: We respectfully disagree,
7 Your Honor, with that. We believe there's plenty of
8 factual evidence in the record from which the jury could
9 make that conclusion.

10 THE COURT: Okay. Do you have any legal
11 authority as to whether expert testimony is or is not
12 necessary for -- in order for it to meet your burden as
13 to obviousness?

14 MS. FROST: There are certain cases --
15 let me see if I can get that. It's easier for me to
16 read off of this than my e-mail.

17 There's a ++Blackboard versus
18 Desire2Learn at 574 Fed 3d 1371, Your Honor, that
19 indicates that expert testimony is not required on the
20 ultimate issue of validity where witness testimony and
21 documents are in evidence on which a conclusion would be
22 based.

23 THE COURT: And what -- was that issue
24 obviousness in that validity case?

25 MS. FROST: I believe so.

1 THE COURT: Okay. Anything further?

2 MS. FROST: And there's a case in our
3 JMOL Mr. Gaston just pointed out to me that we cite for
4 both obviousness and anticipation that expert testimony
5 is unnecessary, and that's Proveris Science Corps versus
6 Innova Systems, Inc., which is 536 Fed 3d 1256, and
7 that's Federal Circuit 2008.

8 MR. ADAMO: Well, Your Honor, I've got
9 the senior case here, Centricut, LLC, versus Esab Group,
10 Inc., 390 Fed 3d 1361 and 1370, Fifth Circuit 2004, and
11 the later panel decisions -- I don't know what these
12 other two cases hold, but Your Honor is well aware the
13 Circuit doesn't let the later panel trump the earlier
14 panel.

15 And this case is plain -- in a case
16 involving complex technology, the patentee cannot
17 satisfy its burden of proof by relying only on the
18 testimony from those who are admittedly not an expert in
19 the field. There hasn't been any expert testimony here.
20 Tittel -- Mr. Tittel was the only one that could have
21 given it, and he swore it during his deposition. I
22 can get you more -- as I said, I can get you more
23 pointed authority on this. I know there is more. We
24 can have it over here in an hour.

25 THE COURT: Do you have it briefed in

1 THE COURT: Response?

2 MR. ADAMO: That's wrong as a matter of
3 law. That's not an accurate statement of what the law
4 is and the requirements of corroboration, and we've
5 weighed those cases out.

6 THE COURT: All right. Objection is
7 overruled.

8 What's next?

9 MS. FROST: With respect to damages, Your
10 Honor, we have a specific request that we would like to
11 hand up to the Court. We'll electronically file it,
12 too. Thank you.

13 We would ask that this instruction deal
14 with the entire market value rule.

15 There's two for y'all. Thank you.

16 MR. ADAMO: Your Honor, they -- there was
17 already a submission of an entire market value rule
18 charge by Defendants, which I would assume you've
19 denied, because it isn't included in your -- the charge
20 that we're working through right now.

21 So I'm not sure where this came from, but
22 this -- they've done this once already, and apparently,
23 you told them no --

24 MS. FROST: No.

25 MR. ADAMO: -- correctly.

1 MS. FROST: I beg your pardon, Mr. Adamo.
2 I didn't mean to interrupt you.

3 We have not proposed this particular
4 language to the Court or to the parties, as -- we've
5 said from the outset --

6 MR. ADAMO: Well, Your Honor --

7 MS. FROST: -- we wanted to reserve our
8 right to make particular changes and suggestions and
9 objections to the charge as the case was presented and
10 the rulings were made and the evidence came in, and we
11 all, I believe, agreed that that would be the way we
12 would proceed.

13 This, we submit, is the best articulation
14 of the situation -- or of the entire market value rule
15 as related to method and system claims that we have been
16 able to come up with.

17 And it's an improvement, we submit, over
18 what we previously gave the Court and shared with
19 opposing counsel and would request that this, which we
20 believe more accurately states the law in this area --

21 THE COURT: Okay. Thank you. It's
22 denied.

23 What's next?

24 MS. FROST: I believe, Your Honor, that
25 takes me to the end of our objections to the charge.

1 P R O C E E D I N G S

2 (Jury out.)

3 COURT SECURITY OFFICER: All rise.

4 THE COURT: Please be seated.

5 All right. Before we bring the jury in,
6 let me just tell you, I am granting Plaintiff's JMOL
7 motion on obviousness. I'm denying it as to
8 anticipation.

9 But I think -- I don't think it's a close
10 call on obviousness. I don't think there's sufficient
11 testimony to present an obviousness case to the jury. I
12 think it would be very confusing to them.

13 On anticipation, I'm going to submit that
14 to the jury. I'm not going to grant the JMOL at this
15 time. But I will say it's a very close call. But if
16 the jury doesn't find it, then we don't have to worry
17 about it. If they do find it, then I'll take a closer
18 look at it when we can look at the transcripts and
19 testimony in the case.

20 So with that said, the -- I have -- we've
21 taken out the obviousness part of the charge.

22 Anticipation is still in. We did move
23 the anticipation date, effective -- I'm sorry --
24 effective date up into -- to include some instructions
25 on that. I think it had been in the obviousness section

1 A printed publication must be reasonably
2 accessible to those members of the public who would be
3 interested in its contents.

4 It is not necessary that the printed
5 publication be available to every member of the public.
6 So long as the printed publication was available to the
7 public, the form in which the information was recorded
8 is unimportant.

9 The information must, however, have been
10 maintained in some permanent form, such as printed or
11 typewritten pages, magnetic tape, microfilm,
12 photographs, or photocopies.

13 A United States patent that was filed
14 before the inventors of the patents-in-suit invented one
15 of their claimed inventions is prior art with respect to
16 those claimed invention -- inventions as of the date the
17 United States patent was filed.

18 In other words, a U.S. patent can be
19 prior art, as of its filing date, if it was filed before
20 the inventors of the patents-in-suit invented their
21 inventions, even if the patent did not actually publish
22 or issue until after the inventors invented their
23 inventions.

24 Next is anticipation by public knowledge
25 or use by another.

1 A patent claim is invalid if the
2 invention recited in that claim was publicly known or
3 used in the United States by someone other than the
4 inventor before the patent applicant invented it or more
5 than one year before the effective filing date of the
6 United States patent application.

7 Private or secret knowledge, such as
8 knowledge confidentially disclosed within a small group,
9 is not enough to invalidate a patent claim. A prior
10 public use by another may anticipate a patent claim even
11 if the use was accidental or was not appreciated by the
12 other person.

13 Thus, a prior public use may anticipate
14 an invention even if the user did not intend to use the
15 invention or even realize he or she had done so.

16 Next is anticipation by a prior
17 invention.

18 A patent claim is invalid if the
19 invention defined by that claim was invented by another
20 person in the United States before it was invented by
21 the patentee and that other person did not abandon,
22 suppress, or conceal the invention.

23 As a general rule, the first person to
24 reduce an invention to practice is said to be the first
25 inventor. An invention is reduced to practice either

1 to review the invention story again, because that is
2 where we start. And that, I believe, is important to
3 keep in mind, because it's been portrayed as if these
4 people invented nothing and certainly nothing that was
5 worth anything.

6 You saw Win Treese testify. He testified
7 here live. In fact, he was also called as a witness by
8 Mr. Sayles.

9 You saw Dr. Stewart, co-inventor also,
10 testify by videotape.

11 So you saw both of the inventors testify,
12 and they talked about the circumstances of their making
13 the inventions of the seven claims of the three
14 patents-in-suit back in 1994/'95.

15 Remember the historic setting. Internet
16 available for commerce in 1991. Worldwide web developed
17 1991/'92. Great potential if you could put the two
18 together. The web gives you pictures, which the
19 internet couldn't do, mostly text. Tremendous potential
20 for business.

21 The problem was, the potential that was
22 there was difficult. There were technical problems,
23 serious technical problems.

24 The potential was, you could possibly
25 develop a website that was just like going to your local

1 check sheets, and he went through element by element to
2 demonstrate infringement to you.

3 Now, this is just summarizing what I've
4 said to you a moment ago about Newegg using the entire
5 system itself. It has its own servers, databases, and
6 network links.

7 Once the customer comes on and the server
8 recognizes the customer, that computer is effectively
9 captured for the purposes of the transaction, as long as
10 they stay online.

11 And in every one of these transactions,
12 they stayed till the end. And from there on out, the
13 buyer computer becomes part of the system, runs on the
14 programming that Mr. Wu designed. That's how
15 Dr. Dris -- excuse me -- that's how we were able to
16 demonstrate to you that there was infringement.

17 Now, active inducement of infringement.
18 And there are -- and I'll show you this just in a
19 moment. He went through, remember, claim after claim
20 after claim after claim following exactly this system.

21 Now, active inducement. Here's the jury
22 charge on active inducement. This is actually an easy
23 act-of-inducement case in contrast to most. Here's the
24 reason why.

25 We're not asking for damages any earlier

1 than when we filed suit, okay? We sued for the reasons
2 Ms. Wolanyk described to you, and that's what starts the
3 damages period, okay?

4 So the various elements that you have to
5 show here, after you've been sued, are relatively
6 straightforward.

7 The person is aware of the patent. Well,
8 yeah, they got sued.

9 The person has an intent to cause the
10 encouraged acts. Well, yeah, they want people to come
11 to the website and buy stuff. They know that in the
12 lawsuit, we've said that infringes, okay?

13 So if you step through the
14 act-of-inducement requirements in the charge, you will
15 see that they're very readily demonstrated because we
16 had already sued them. They knew exactly -- and the
17 lawsuit was going on, so they were getting more and more
18 information every day about what we said they were doing
19 wrong and what infringed.

20 So there's no question about the fact
21 that they had the necessary intent here. This is
22 clearer than the usual -- the usual case because of the
23 lawsuit.

24 Now, Newegg's raised all sorts of excuses
25 and explanations as to why what they've done really

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1 THE COURT: Who?
2 COURTROOM DEPUTY: Kristi Develin.
3 THE COURT: Kristi Develin. Which one is
4 she, right front?
5 MR. BALDAUF: She's the one that was
6 asking questions during the --
7 THE COURT: Okay. Thank you.
8 All right, Ms. Ferguson.
9 Counsel approach the bench, if you would.
10 THE REPORTER: Is this on the record?
11 THE COURT: No. It's off the record.
12 (Bench conference off the record.)
13 (Court in recess.)
14 (Jury deliberations continue.)
15 (Jury out.)
16 COURT SECURITY OFFICER: All rise.
17 THE COURT: Please be seated.
18 All right. I've been informed we have a
19 verdict. Is there anything before I bring the jury in?
20 MR. SAYLES: No, Your Honor.
21 MR. ADAMO: No, Your Honor.
22 THE COURT: All right. You may bring the
23 jury in.
24 COURT SECURITY OFFICER: All rise for the
25 jury.

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1 (Jury in.)

2 THE COURT: Please be seated.

3 All right. I understand that you've

4 reached a verdict; is that correct?

5 THE FOREPERSON: (Nods head.)

6 THE COURT: All right. If you'll hand

7 the verdict to the court security officer, please.

8 THE FOREPERSON: (Complies.)

9 THE COURT: All right. Ms. Ferguson, if
10 you will, please read the verdict.

11 COURTROOM DEPUTY: In Case

12 No. 6:07-CV-511, Soverain versus Newegg, verdict.

13 Under infringement, as to direct
14 infringement on the '314 patent and the '492 patent, the
15 answer is no.

16 Under inducement, as to the '314 patent
17 and the '492 patent, all the answers are yes.

18 On Question No. 2, as to the '639 patent,
19 as to Claim 60 and 79, the answer is no.

20 Under invalidity, as to the '314, the
21 '492, and the '639 patent, the answer is all no as to
22 all claims.

23 Under damages, the answer to Question No.
24 4 is 2 million 500 dollars (sic) as to patent '134 or
25 the '492 patent.

1 As to the '639 patent, the answer is
2 zero, signed and dated by the jury foreperson.

3 THE COURT: All right. Thank you,
4 Ms. Ferguson.

5 Is there any request to poll the jury?

6 MR. ADAMO: Yes, Your Honor, please.

7 THE COURT: All right. All members of
8 the jury who that represents your verdict, as
9 Ms. Ferguson just read it, if you will please stand.

10 (All jurors stand.)

11 THE COURT: All right. Thank you. You
12 may be seated.

13 All right. Members of the Jury, first,
14 the Court wants to thank you for your service here this
15 week. You have all worked extremely hard. It's been a
16 long, tedious case. You've listened intently, and you
17 provided a valuable public service, which is critical to
18 the administration of justice guaranteed under our
19 Constitution.

20 Without your patient and humble service,
21 these guarantees could not be met, and the Court thanks
22 you for your service.

23 You have now completed your service. You
24 have previously been instructed by me not to discuss
25 this case with others, including your family and

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION**

FILED CLERK
U.S. DISTRICT COURT
2007 NOV -2 PM 12:35
TEXAS EASTERN

Soverain Software LLC,

Plaintiff,

v.

CDW Corporation,

Newegg Inc.,

Redcats USA, Inc.,

Systemax Inc., and

Zappos.com, Inc.,

Defendants.

BY _____

Civil Action No. 6:07cv511

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

1. Plaintiff Soverain Software LLC, for its Complaint against Defendants CDW Corporation, Newegg Inc., Redcats USA, Inc., Systemax Inc., and Zappos.com, Inc. (collectively "Defendants"), alleges as follows.

INTRODUCTION

2. This is an action arising under 35 U.S.C. § 271 for Defendants' infringement of one or more of Soverain Software LLC's United States Patent Nos. 5,715,314, 5,909,492, and 7,272,639 (collectively, "the Patents-in-Suit").

THE PARTIES

3. Plaintiff Soverain Software LLC ("Soverain") is a Delaware limited liability company with its principal place of business at 233 South Wacker Drive, Suite 3970, Chicago, IL 60606.

4. On information and belief, defendant CDW Corporation ("CDW") is an Illinois corporation with its principal place of business at 200 North Milwaukee Ave., Vernon Hills, IL 60061. CDW does business principally through the ecommerce website www.cdw.com. Defendant CDW may be served by serving the Secretary of State of the State of Texas pursuant to the Texas Long Arm Statute, Texas Civil Practice & Remedies Code § 17.044 and asking the Secretary of State to serve CDW at its principal place of business at 200 North Milwaukee Ave., Vernon Hills, IL 60061 via Certified Mail–Return Receipt Requested.

5. On information and belief, defendant Newegg Inc. ("Newegg") is a Delaware corporation with its principal place of business at 16839 East Gale Ave., City of Industry, CA 91745. Newegg does business principally through the ecommerce website www.newegg.com. Defendant Newegg may be served by serving the Secretary of State of the State of Texas pursuant to the Texas Long Arm Statute, Texas Civil Practice & Remedies Code § 17.044 and asking the Secretary of State to serve Newegg at its principal place of business at 16839 East Gale Ave., City of Industry, CA 91745 via Certified Mail – Return Receipt Requested.

6. On information and belief, defendant Redcats USA, Inc. ("Redcats") is a Delaware corporation with its principal place of business at 463 7th Avenue, New York, NY 10018. Redcats does business through, among others, ecommerce websites www.lanebryant.com, www.sportsmansguide.com, www.onestopplus.com, www.tgw.com, and www.bargainoutfitters.com. Defendant Redcats may be served by serving the Secretary of State of the State of Texas pursuant to the Texas Long Arm Statute, Texas Civil Practice & Remedies Code § 17.044 and asking the Secretary of State to serve Redcats at its principal place of business at 463 7th Avenue, New York, NY 10018 via Certified Mail – Return Receipt Requested.

7. On information and belief, defendant Systemax Inc. ("Systemax") is a Delaware corporation with its principal place of business at 11 Harbor Park Dr., Port Washington, NY 11050. Systemax does business through, among others, ecommerce websites www.tigerdirect.com and www.systemaxpc.com. Defendant Systemax may be served by serving the Secretary of State of the State of Texas pursuant to the Texas Long Arm Statute, Texas Civil Practice & Remedies Code § 17.044 and asking the Secretary of State to serve Systemax at its principal place of business at 11 Harbor Park Dr., Port Washington, NY 11050 via Certified Mail – Return Receipt Requested.

8. On information and belief, defendant Zappos.com, Inc. ("Zappos") is a Delaware corporation with its principal place of business at 2280 Corporate Circle Dr., Suite 100, Henderson, NV 89074. Zappos does business principally through the ecommerce website www.zappos.com. Defendant Zappos may be served by serving the Secretary of State of the State of Texas pursuant to the Texas Long Arm Statute, Texas Civil Practice & Remedies Code § 17.044 and asking the Secretary of State to serve Zappos at its principal place of business at 2280 Corporate Circle Dr., Suite 100, Henderson, NV 89074 via Certified Mail – Return Receipt Requested.

JURISDICTION AND VENUE

9. This action arises under the patent laws of the United States, Title 35, United States Code. The jurisdiction of this Court over the subject matter of this action is proper under 28 U.S.C. § 1338.

10. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b) and (c) and 1400(b).

11. Personal jurisdiction exists over Defendants because they do business in Texas and infringing acts have occurred here.

12. On information and belief, Defendants are nonresidents of the State of Texas; the Secretary of State of the State of Texas is the agent for service in the State of Texas for Defendants; Defendants engaged and continue to engage in business in the State of Texas; Defendants do not maintain regular places of business in the State of Texas; Defendants do not have designated agents for service of process in the State of Texas; and this action arises out of Defendants' business in the State of Texas.

PATENTS-IN-SUIT

13. Plaintiff Soverain is the owner of all right, title, and interest in United States Patent No. 5,715,314 entitled "Network Sales System" ("the '314 patent"). The '314 patent was duly and properly issued by the United States Patent and Trademark Office ("PTO") on February 3, 1998. The '314 patent was assigned to Plaintiff Soverain. The United States Patent and Trademark Office has reexamined the '314 patent and has issued Ex Parte Reexamination Certificate No. 5,715,314 C1 on October 9, 2007. A copy of the '314 patent is attached hereto as Exhibit A. A copy of the Ex Parte Reexamination Certificate No. 5,715,314 C1 is attached as Exhibit B.

14. Plaintiff Soverain is the owner of all right, title, and interest in United States Patent No. 5,909,492 entitled "Network Sales System" ("the '492 patent"). The '492 patent was duly and properly issued by the PTO on June 1, 1999. The '492 patent was assigned to Plaintiff Soverain. The PTO has reexamined the '492 patent and has issued Ex Parte Reexamination Certificate No. 5,909,492 C1 on August 7, 2007. A copy of the '492 patent is attached hereto as

Exhibit C. A copy of the Ex Parte Reexamination Certificate No. 5,909,492 C1 is attached as Exhibit D.

15. Plaintiff Soverain is the owner of all right, title, and interest in United States Patent No. 7,272,639 entitled "Internet Server Access Control And Monitoring Systems" ("the '639 patent"). The '639 patent was duly and properly issued by the PTO on September 18, 2007. The '639 patent was assigned to Plaintiff Soverain. A copy of the '639 patent is attached hereto as Exhibit E.

16. Plaintiff Soverain has marked its product with the numbers of one or more of the patents-in-suit.

INFRINGEMENT OF THE PATENTS-IN-SUIT BY CDW

17. In violation of 35 U.S.C. § 271, Defendant CDW through its ecommerce website(s) has infringed and continues to infringe the '314, '492, and '639 patents by: (a) making, using, offering for sale or selling within the United States, products or processes that practice inventions claimed in those patents; (b) inducing others to make, use, offer for sale or sell within the United States, products or processes that practice inventions claimed in those patents; or (c) contributing to the making, using, offering for sale or selling within the United States, products or processes that practice inventions claimed in those patents.

18. On information and belief, Defendant CDW has had notice of its infringement of the '314, '492, and '639 patents at least as early as the filing of this Complaint.

19. Plaintiff Soverain has been damaged by the infringement of its patents by Defendant CDW and will continue to be damaged by such infringement.

20. Plaintiff Soverain has suffered and continues to suffer irreparable harm and will continue to do so unless Defendant CDW is enjoined therefrom by this Court.

INFRINGEMENT OF THE PATENTS-IN-SUIT BY NEWEGG

21. In violation of 35 U.S.C. § 271, Defendant Newegg through its ecommerce website(s) has infringed and continues to infringe the '314, '492, and '639 patents by: (a) making, using, offering for sale or selling within the United States, products or processes that practice inventions claimed in those patents; (b) inducing others to make, use, offer for sale or sell within the United States, products or processes that practice inventions claimed in those patents; or (c) contributing to the making, using, offering for sale or selling within the United States, products or processes that practice inventions claimed in those patents.

22. On information and belief, Defendant Newegg has had notice of its infringement of the '314, '492, and '639 patents at least as early as the filing of this Complaint.

23. Plaintiff Soverain has been damaged by the infringement of its patents by Defendant Newegg and will continue to be damaged by such infringement.

24. Plaintiff Soverain has suffered and continues to suffer irreparable harm and will continue to do so unless Defendant Newegg is enjoined therefrom by this Court.

INFRINGEMENT OF THE PATENTS-IN-SUIT BY REDCATS

25. In violation of 35 U.S.C. § 271, Defendant Redcats through its ecommerce website(s) has infringed and continues to infringe the '314, '492, and '639 patents by: (a) making, using, offering for sale or selling within the United States, products or processes that practice inventions claimed in those patents; (b) inducing others to make, use, offer for sale or

sell within the United States, products or processes that practice inventions claimed in those patents; or (c) contributing to the making, using, offering for sale or selling within the United States, products or processes that practice inventions claimed in those patents.

26. On information and belief, Defendant Redcats has had notice of its infringement of the '314, '492, and '639 patents at least as early as the filing of this Complaint.

27. Plaintiff Soverain has been damaged by the infringement of its patents by Defendant Redcats and will continue to be damaged by such infringement.

28. Plaintiff Soverain has suffered and continues to suffer irreparable harm and will continue to do so unless Defendant Redcats is enjoined therefrom by this Court.

INFRINGEMENT OF THE PATENTS-IN-SUIT BY SYSTEMAX

29. In violation of 35 U.S.C. § 271, Defendant Systemax through its ecommerce website(s) has infringed and continues to infringe the '314, '492, and '639 patents by: (a) making, using, offering for sale or selling within the United States, products or processes that practice inventions claimed in those patents; (b) inducing others to make, use, offer for sale or sell within the United States, products or processes that practice inventions claimed in those patents; or (c) contributing to the making, using, offering for sale or selling within the United States, products or processes that practice inventions claimed in those patents.

30. On information and belief, Defendant Systemax has had notice of its infringement of the '314, '492, and '639 patents at least as early as the filing of this Complaint.

31. Plaintiff Soverain has been damaged by the infringement of its patents by Defendant Systemax and will continue to be damaged by such infringement.

32. Plaintiff Soverain has suffered and continues to suffer irreparable harm and will continue to do so unless Defendant Systemax is enjoined therefrom by this Court.

INFRINGEMENT OF THE PATENTS-IN-SUIT BY ZAPPOS

33. In violation of 35 U.S.C. § 271, Defendant Zappos through its ecommerce website(s) has infringed and continues to infringe the '314, '492, and '639 patents by: (a) making, using, offering for sale or selling within the United States, products or processes that practice inventions claimed in those patents; (b) inducing others to make, use, offer for sale or sell within the United States, products or processes that practice inventions claimed in those patents; or (c) contributing to the making, using, offering for sale or selling within the United States, products or processes that practice inventions claimed in those patents.

34. On information and belief, Defendant Zappos has had notice of its infringement of the '314, '492, and '639 patents at least as early as the filing of this Complaint.

35. Plaintiff Soverain has been damaged by the infringement of its patents by Defendant Zappos and will continue to be damaged by such infringement.

36. Plaintiff Soverain has suffered and continues to suffer irreparable harm and will continue to do so unless Defendant Zappos is enjoined therefrom by this Court.

RELIEF REQUEST

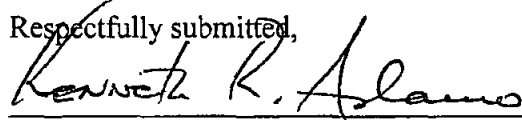
Wherefore, Plaintiff Soverain respectfully requests that this Court enter judgment against Defendants CDW, Newegg, Redcats, Systemax, and Zappos as follows:

- A. That each of the Patents-in-Suit is valid and enforceable;
- B. That each of the '314, '492, and '639 patents has been infringed by Defendant CDW;

- C. That each of the '314, '492, and '639 patents has been infringed by Defendant Newegg;
- D. That each of the '314, '492, and '639 patents has been infringed by Defendant Redcats;
- E. That each of the '314, '492, and '639 patents has been infringed by Defendant Systemax;
- F. That each of the '314, '492, and '639 patents has been infringed by Defendant Zappos;
- G. An injunction against further infringement of the Patents-in-Suit by Defendants;
- H. An award of damages adequate to compensate Plaintiff Soverain for the patent infringement that has occurred, together with pre-judgment interest and costs;
- I. An award of all other damages permitted by 35 U.S.C. § 284, including increased damages up to three times the amount of compensatory damages found;
- J. That this is an exceptional case and an award to Plaintiff Soverain of its costs and reasonable attorneys' fees incurred in this action as provided by 35 U.S.C. § 285; and
- K. Such other relief as this Court deems just and proper.

November 2, 2007

Respectfully submitted,



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EXHIBIT A



US005715314A

United States Patent [19]

Payne et al.

[11] Patent Number: **5,715,314**[45] Date of Patent: **Feb. 3, 1998**[54] **NETWORK SALES SYSTEM**

[75] Inventors: Andrew C. Payne, Lincoln; Lawrence C. Stewart, Burlington; David J. Mackie, Cambridge, all of Mass.

[73] Assignee: Open Market, Inc., Cambridge, Mass.

[21] Appl. No.: 328,133

[22] Filed: Oct. 24, 1994

[51] Int. Cl.⁶ H04L 9/00

[52] U.S. Cl. 380/24; 380/23; 380/25; 380/49; 380/50

[58] Field of Search 380/4, 21, 23, 380/24, 25, 49, 50; 364/401, 406, 408, 284.4; 235/379, 380; 395/200.01, 200.02, 200.09, 925

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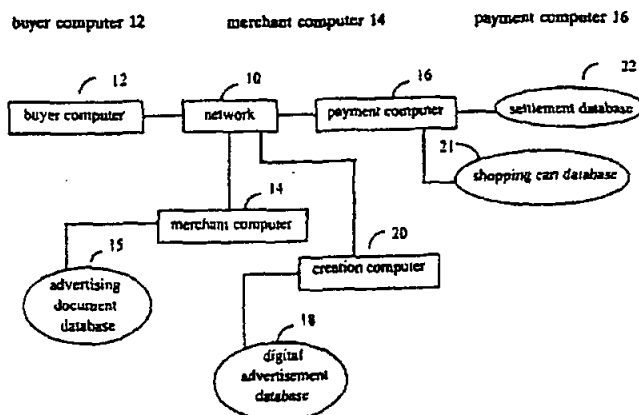
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(List continued on next page.)

Primary Examiner—Bernard E. Gregory
Attorney, Agent, or Firm—Fish & Richardson P.C.[57] **ABSTRACT**

A network-based sales system includes at least one buyer computer for operation by a user desiring to buy a product, at least one merchant computer, and at least one payment computer. The buyer computer, the merchant computer, and the payment computer are interconnected by a computer network. The buyer computer is programmed to receive a user request for purchasing a product, and to cause a payment message to be sent to the payment computer that comprises a product identifier identifying the product. The payment computer is programmed to receive the payment message, to cause an access message to be created that comprises the product identifier and an access message authenticator based on a cryptographic key, and to cause the access message to be sent to the merchant computer. The merchant computer is programmed to receive the access message, to verify the access message authenticator to ensure that the access message authenticator was created using the cryptographic key, and to cause the product to be sent to the user desiring to buy the product.

48 Claims, 25 Drawing Sheets

Microfiche Appendix Included
(1 Microfiche, 34 Pages)

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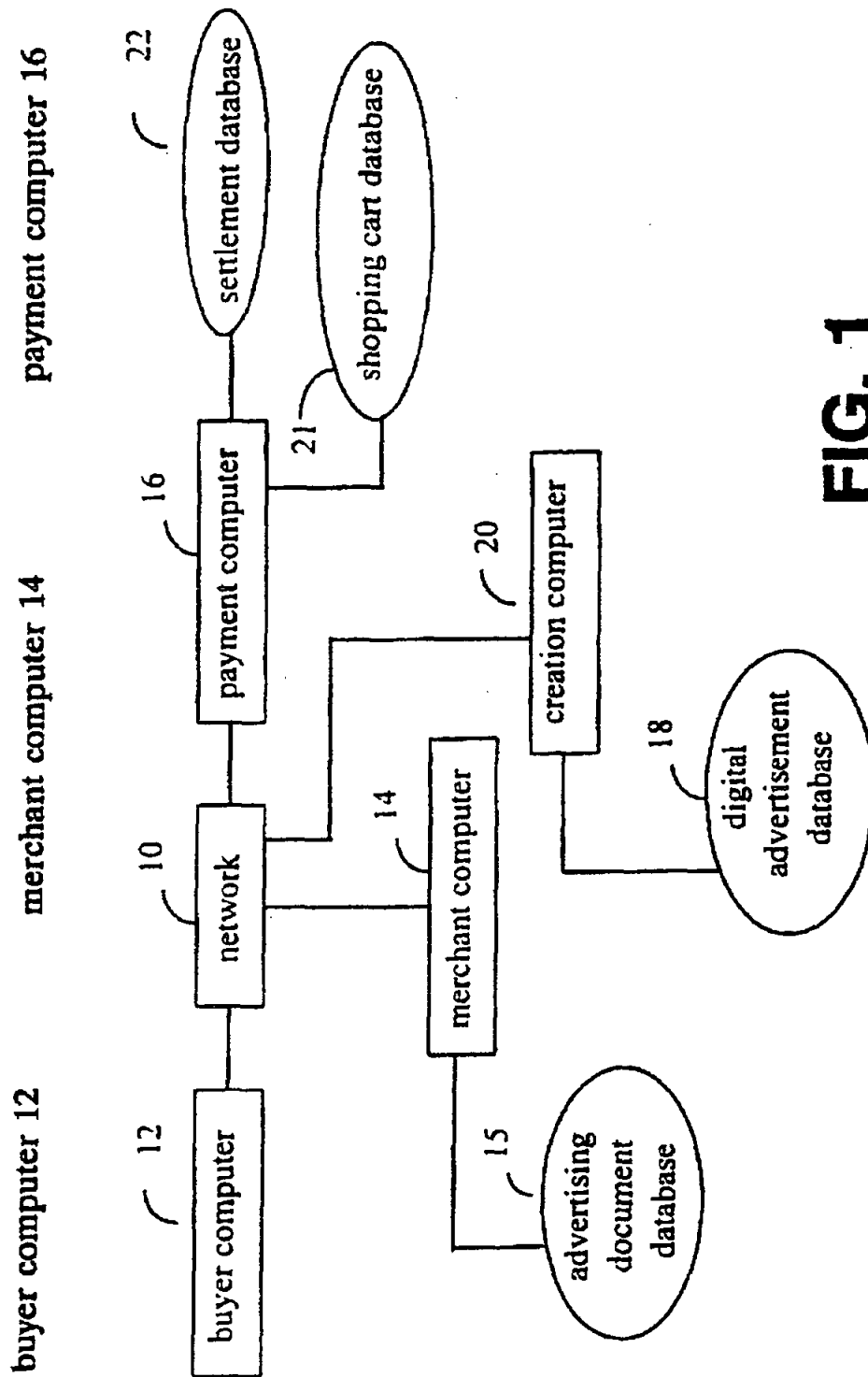
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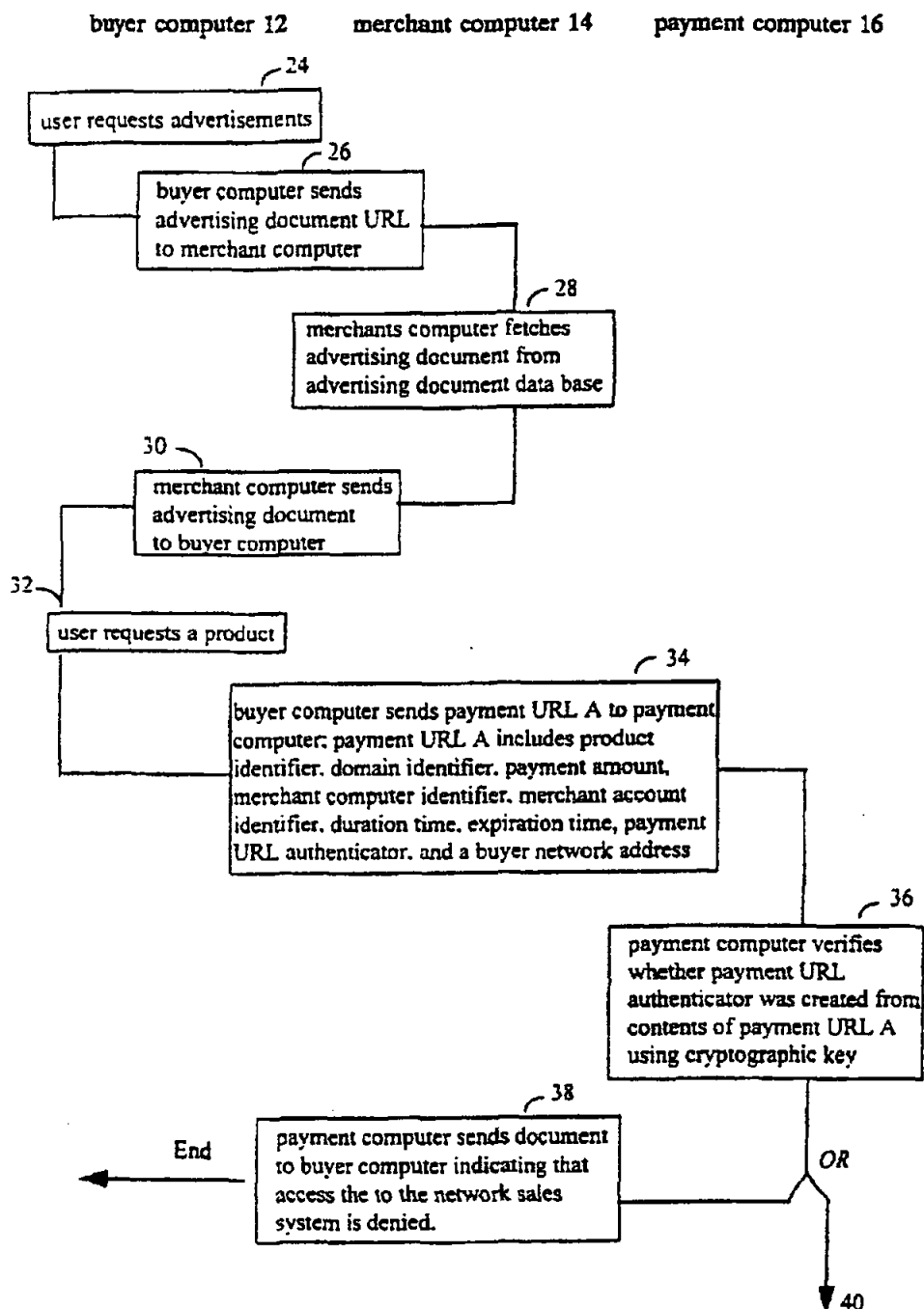


FIG. 2A

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buyer computer 12

merchant computer 14

payment computer 16

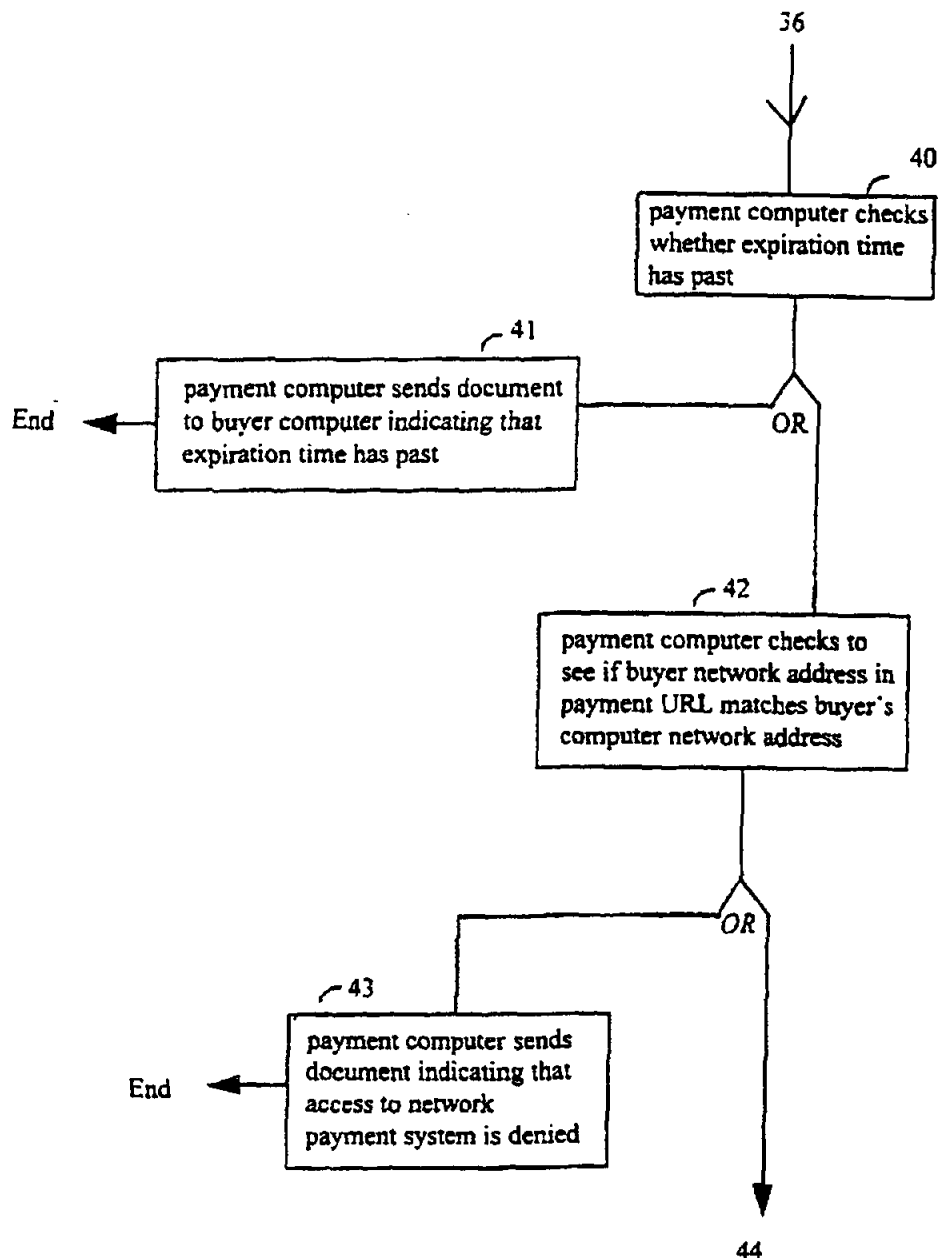


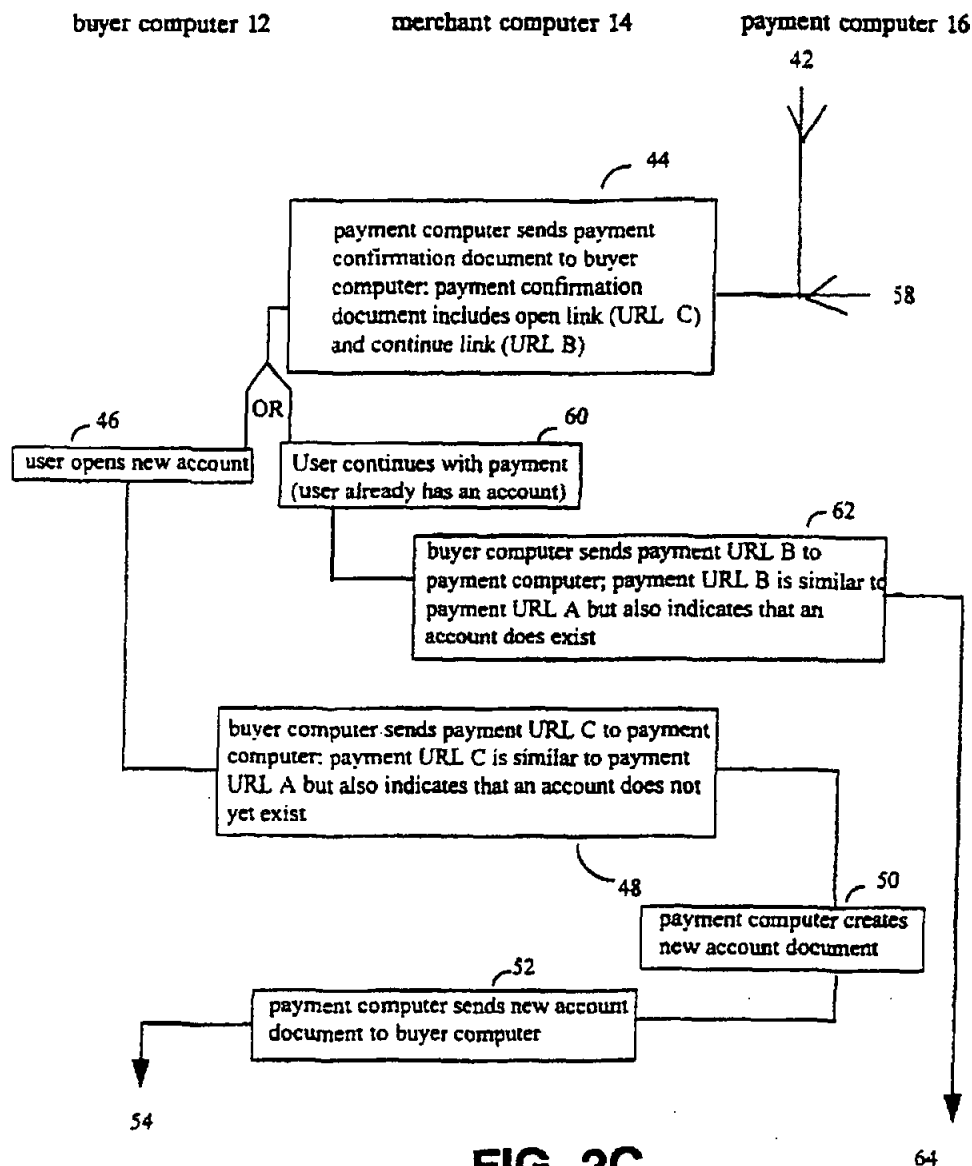
FIG. 2B

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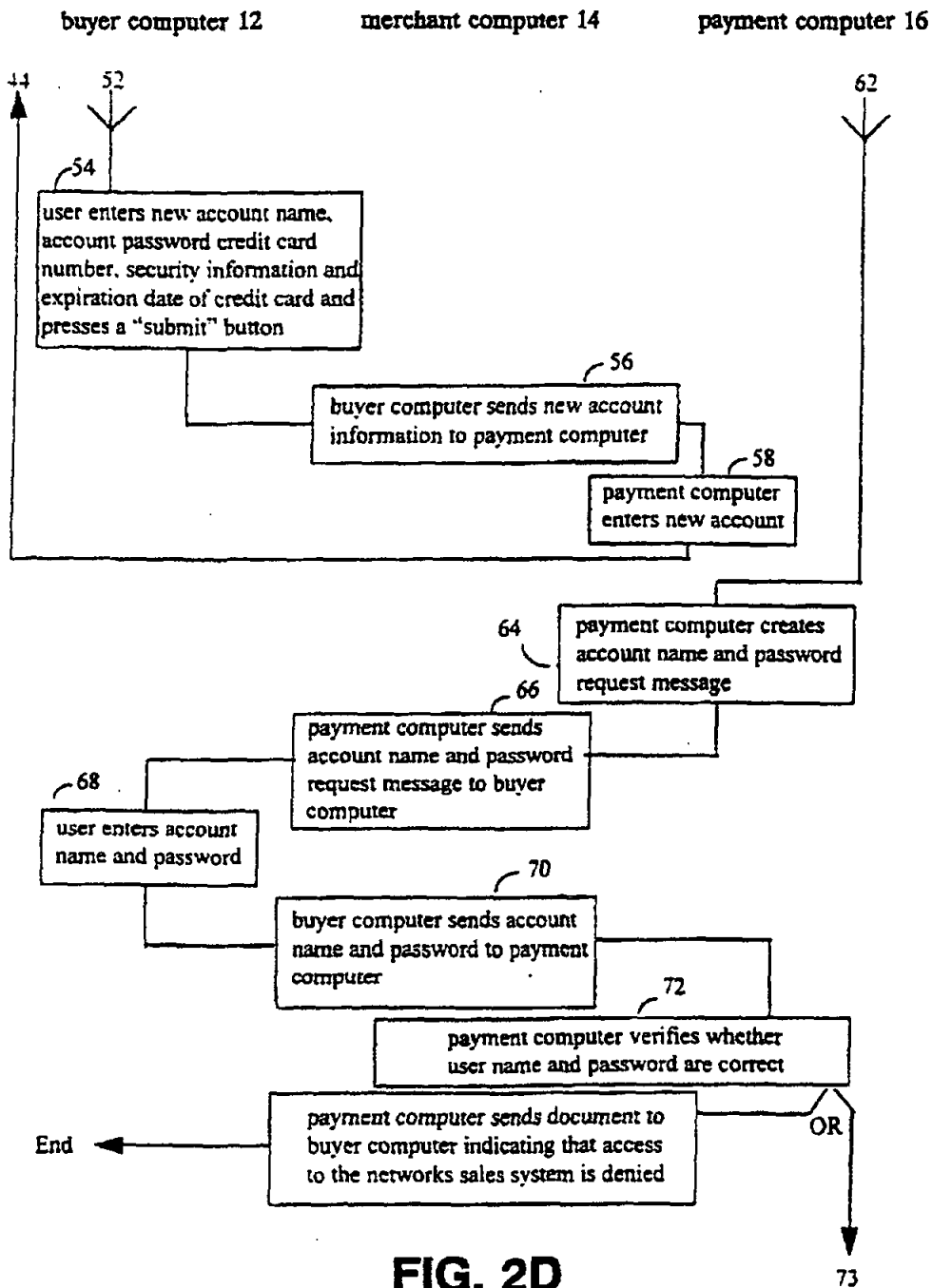


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buyer computer 12

merchant computer 14

payment computer 16

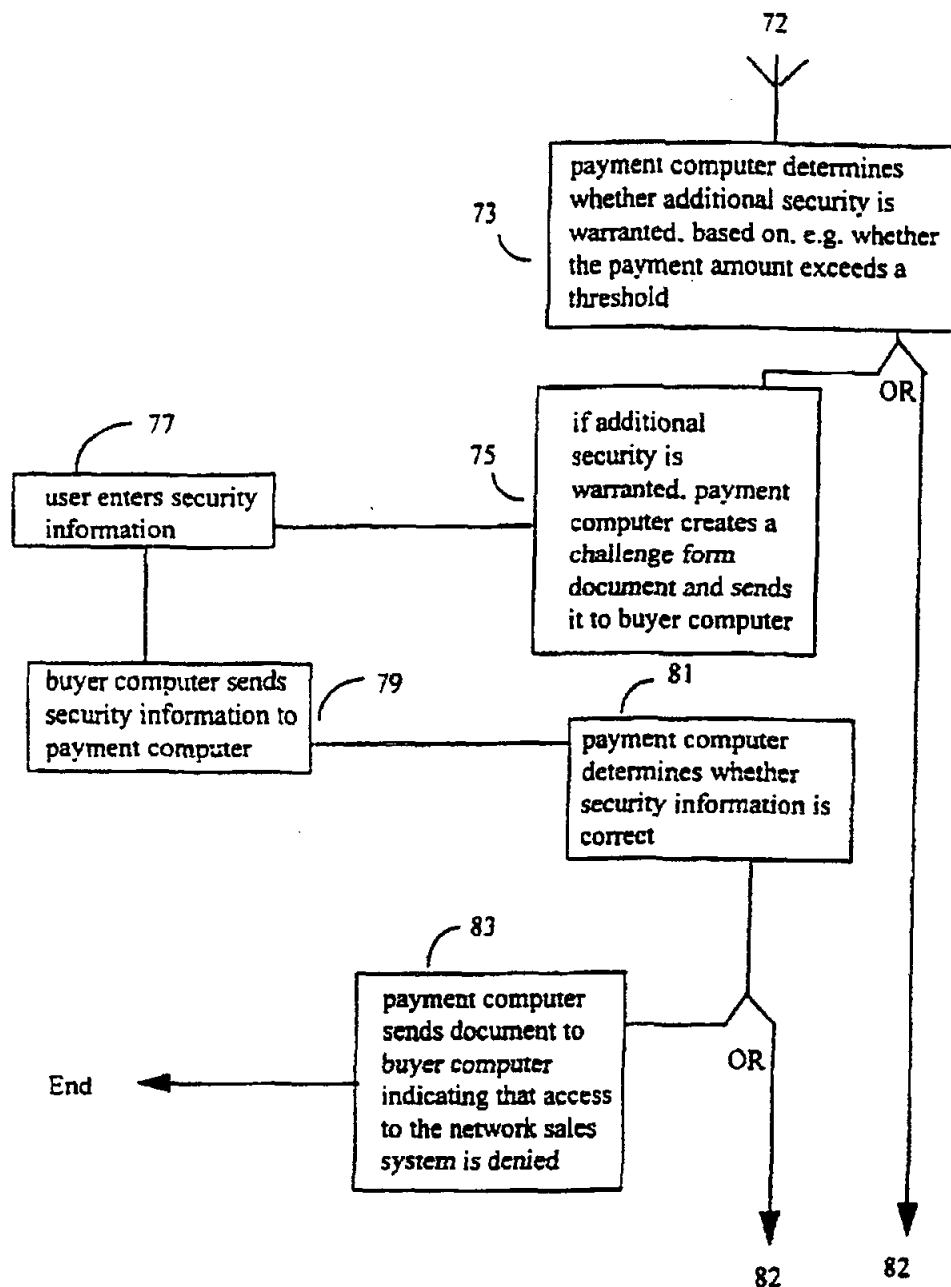


FIG. 2E

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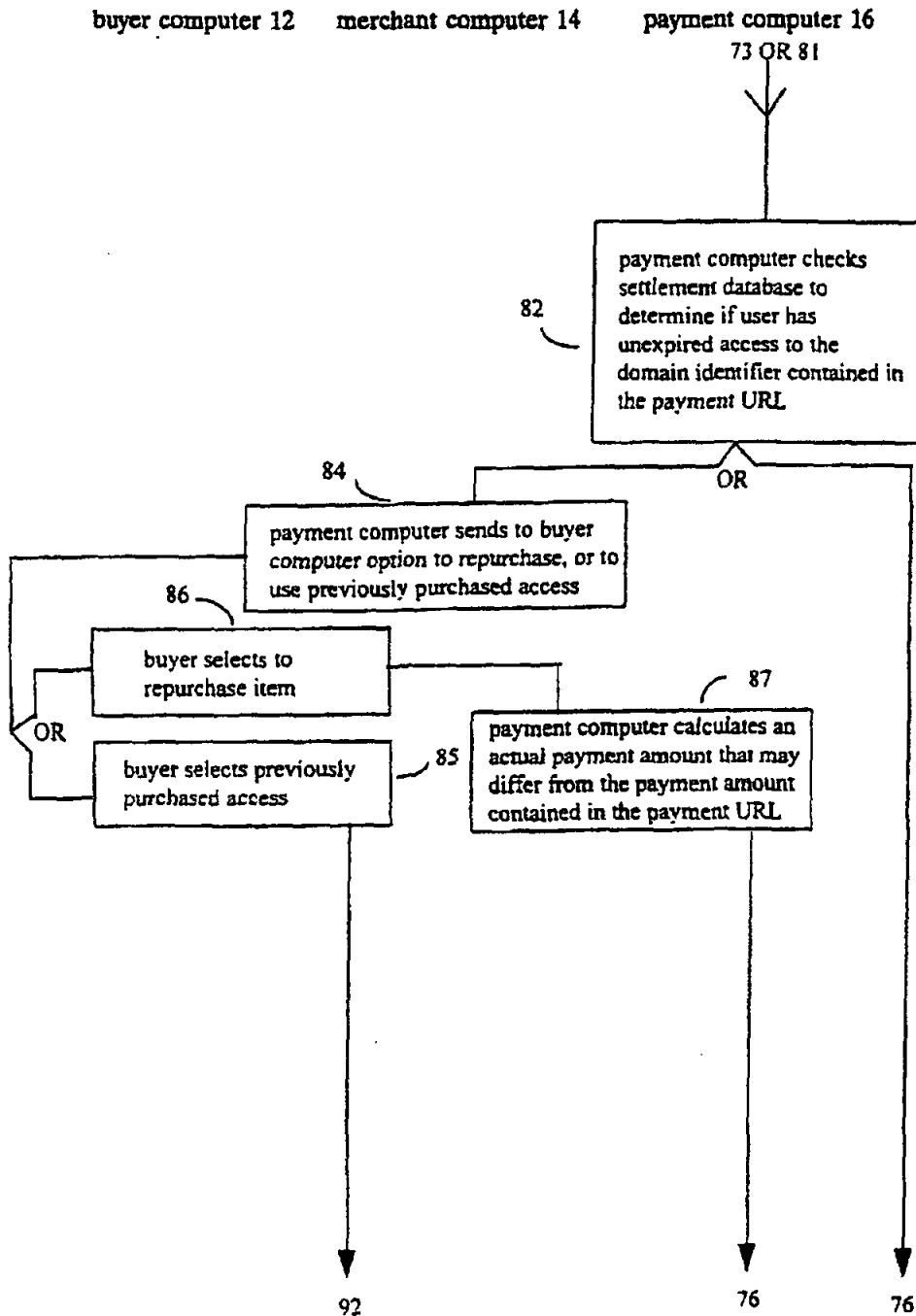


FIG. 2F

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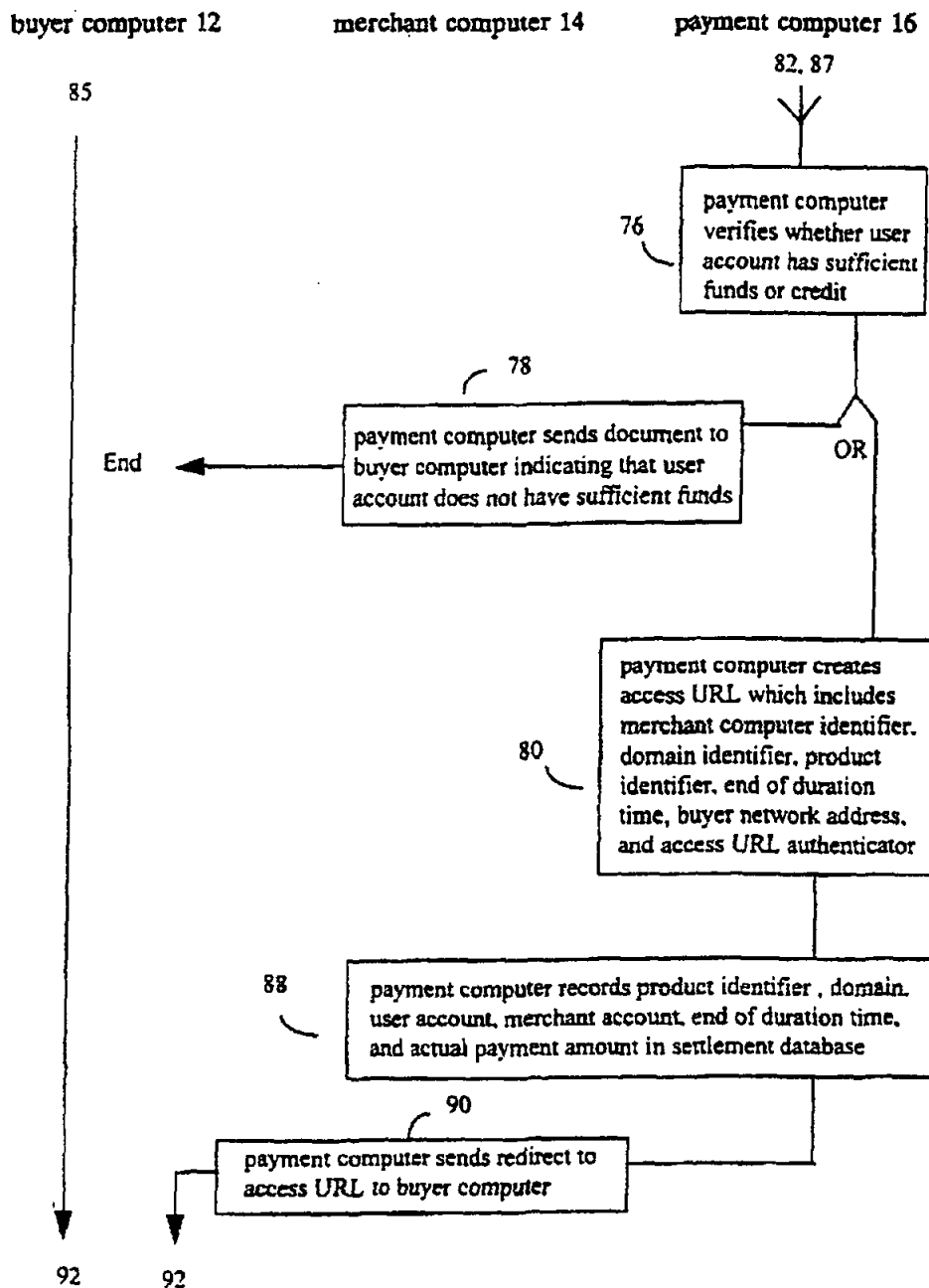


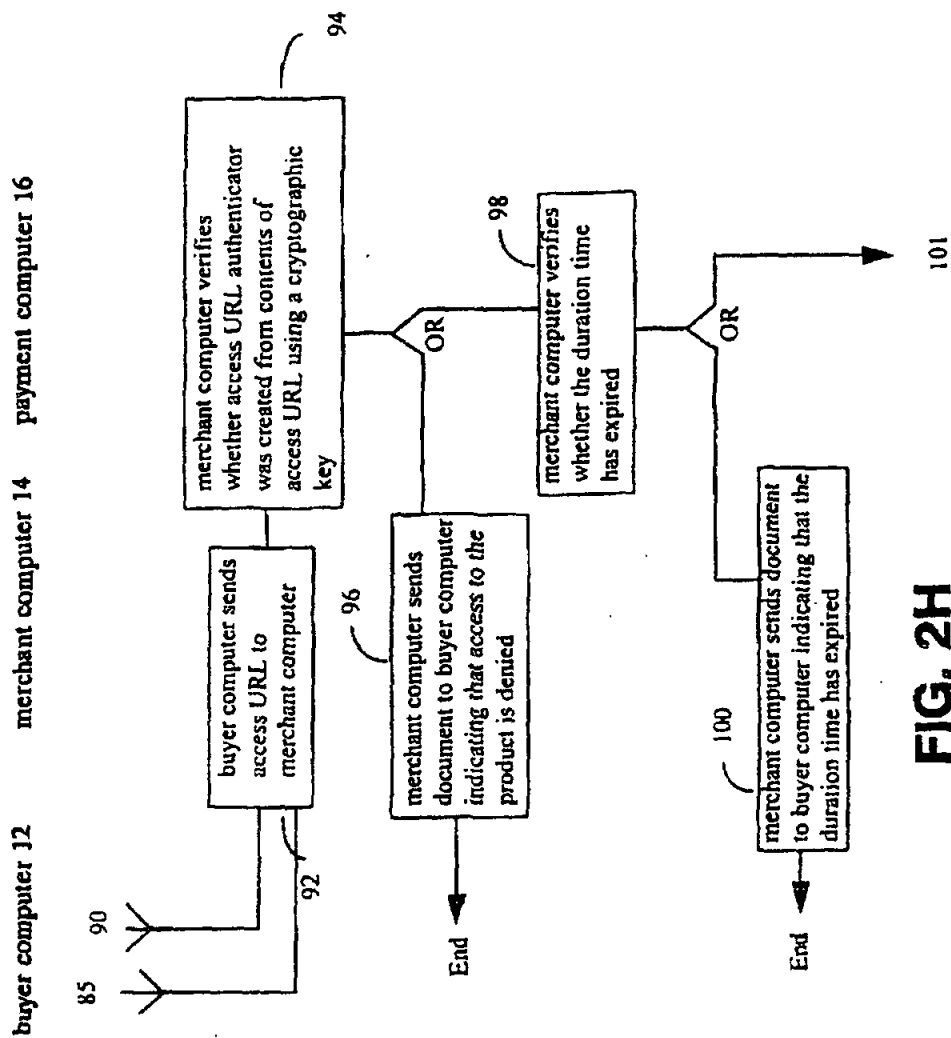
FIG. 2G

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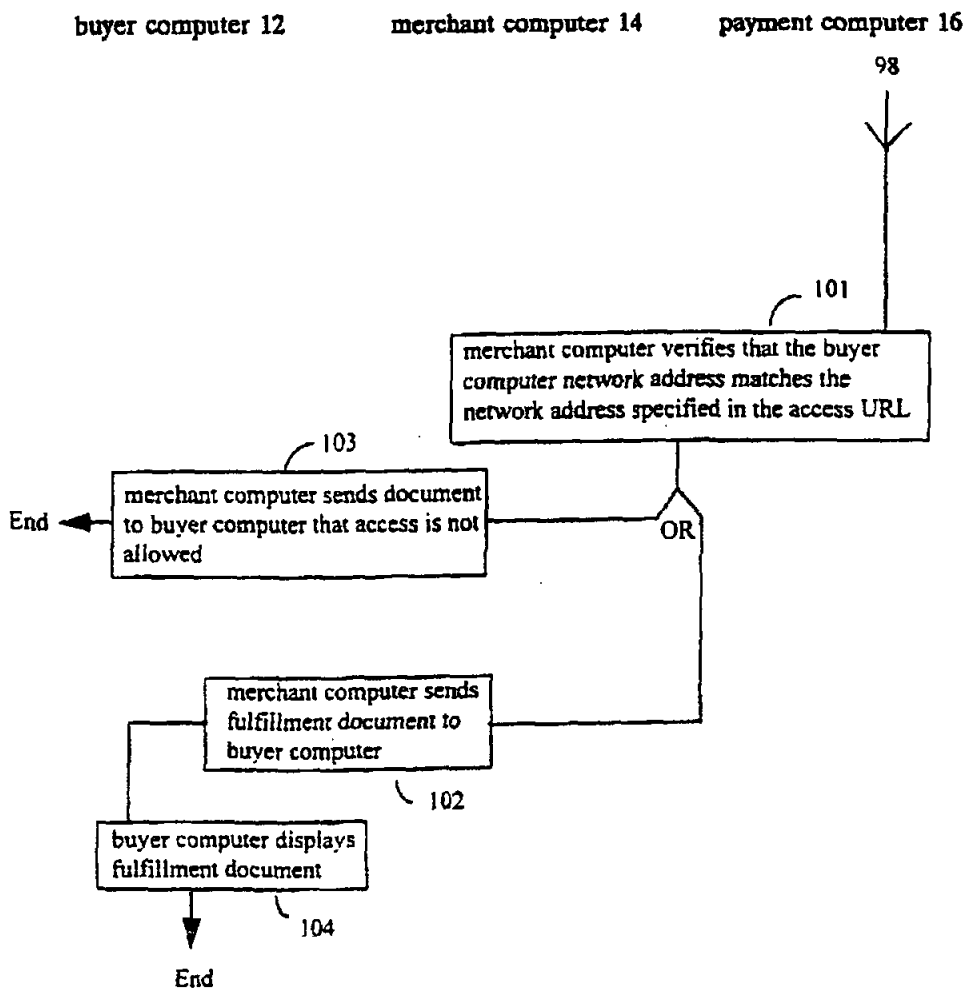


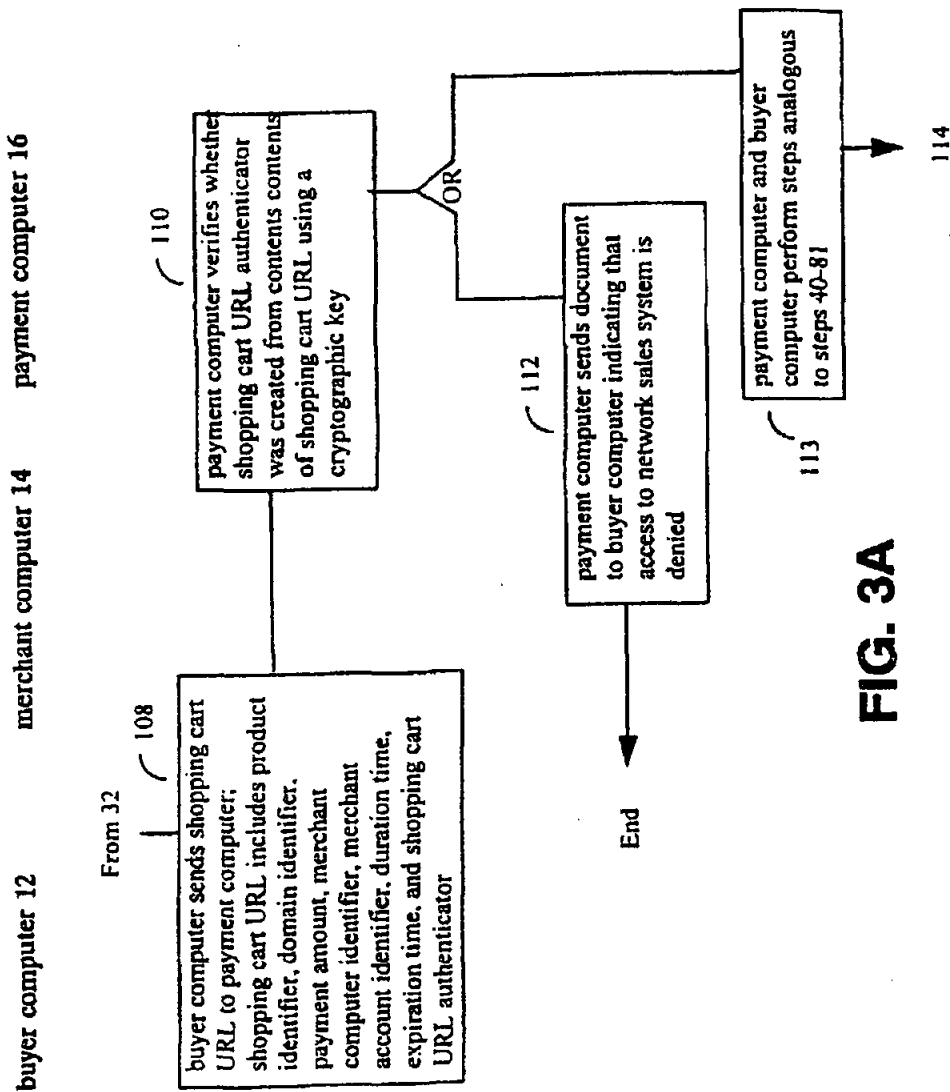
FIG. 2I

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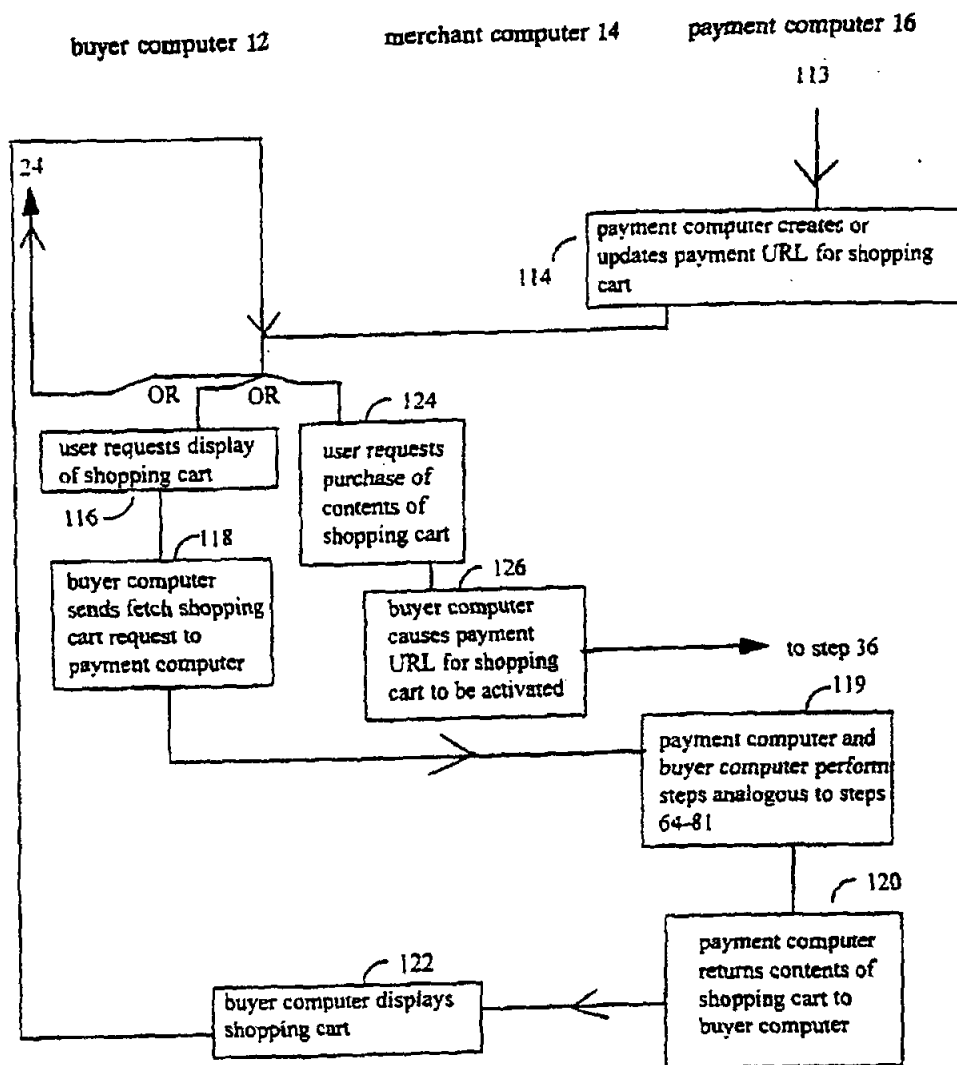


FIG. 3B

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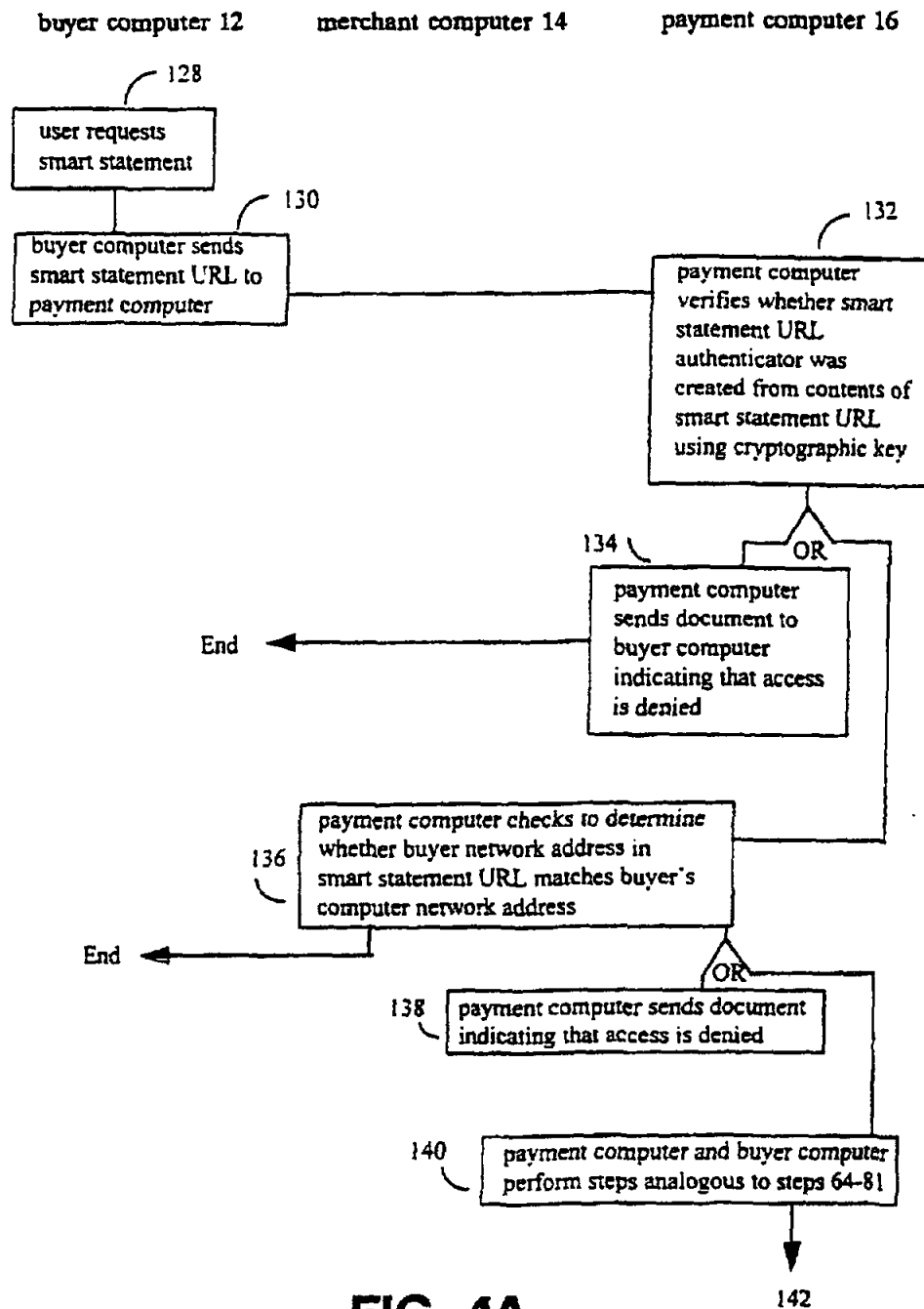


FIG. 4A

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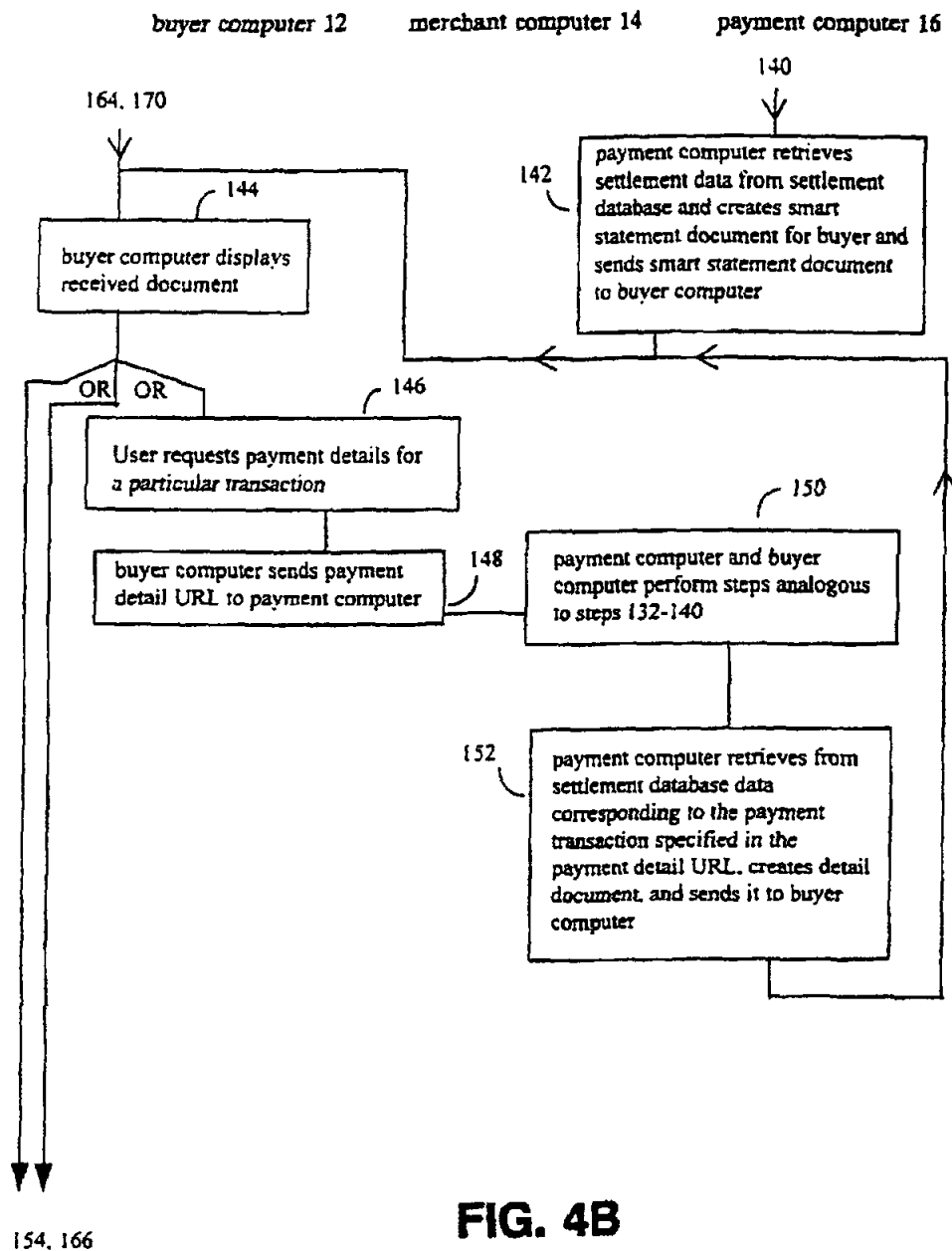


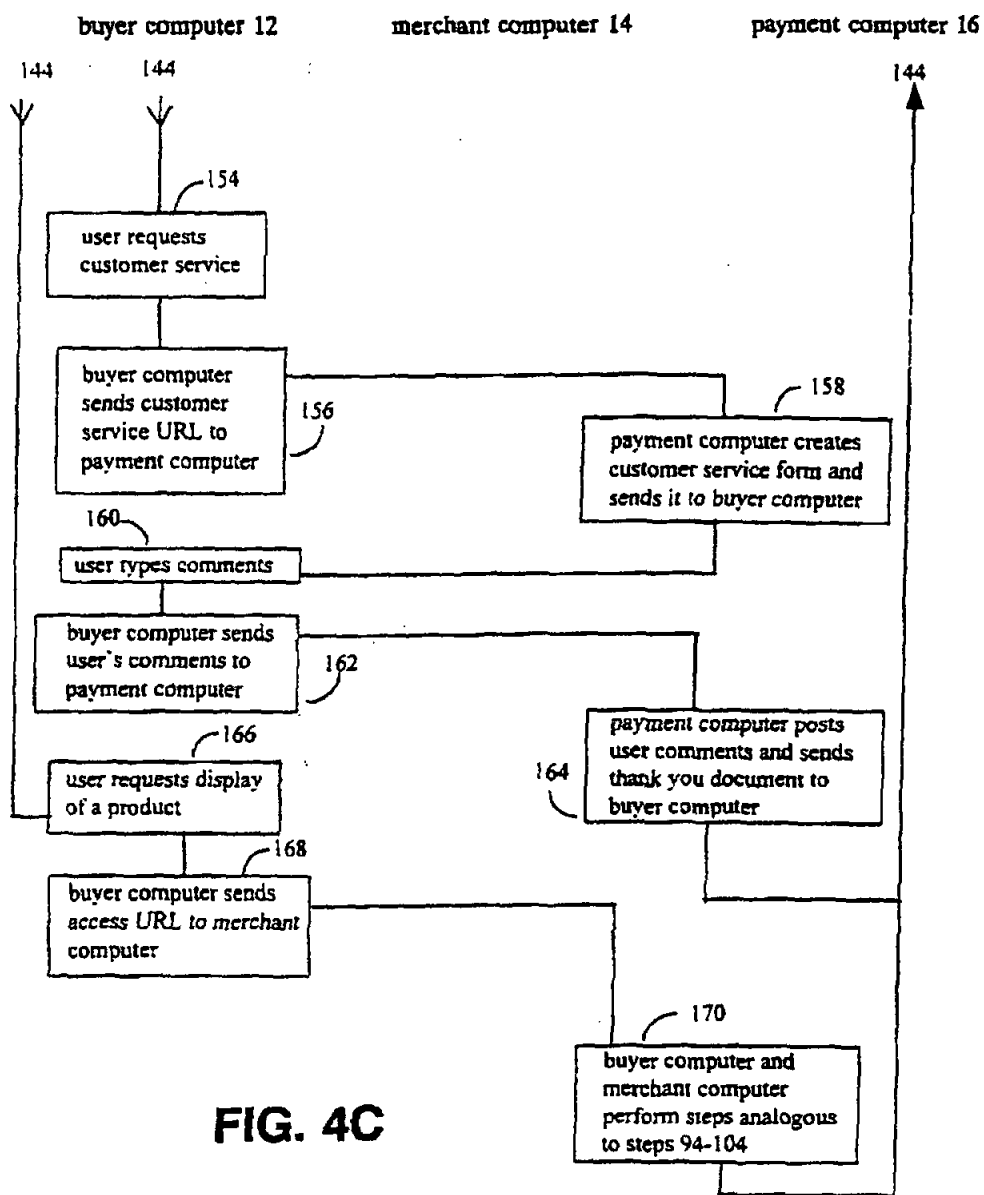
FIG. 4B

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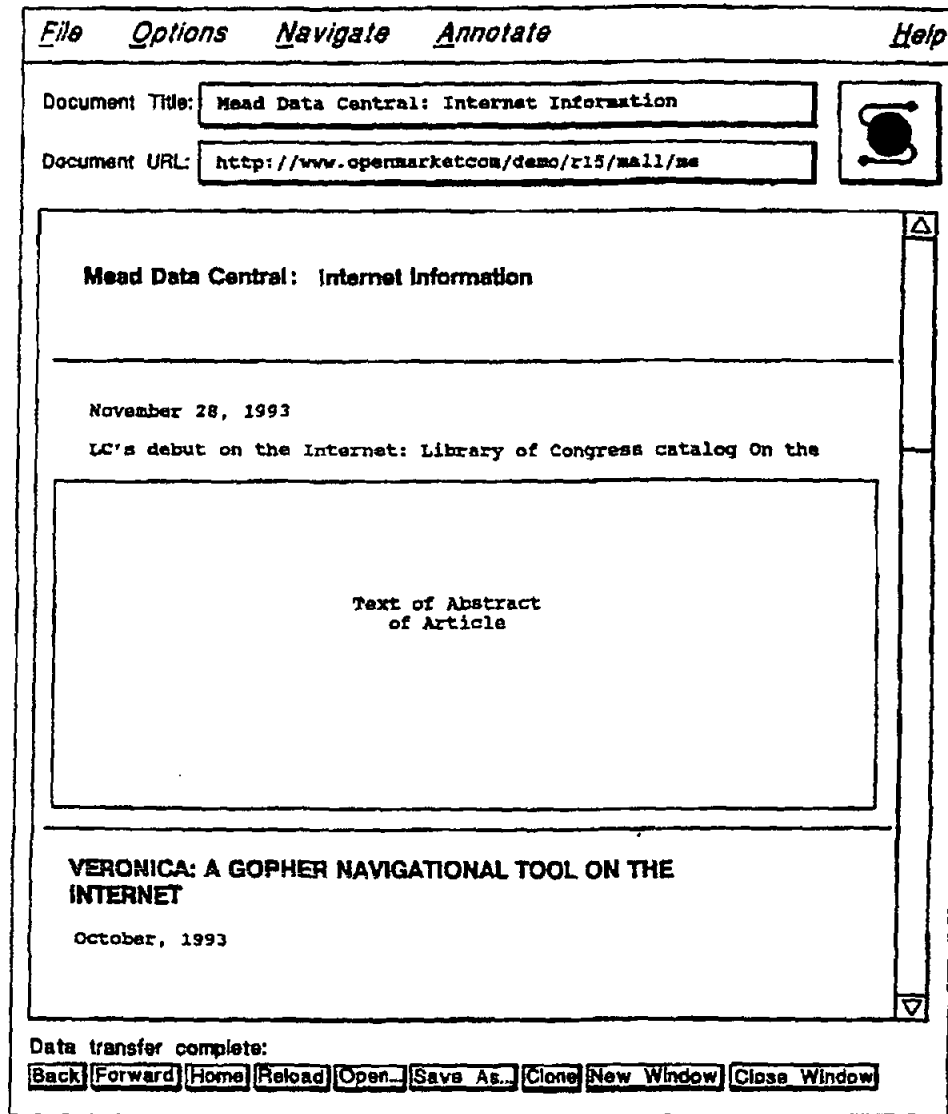


FIG. 5

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<u>File</u>	<u>Options</u>	<u>Navigate</u>	<u>Annotate</u>	<u>Help</u>
Document Title: <input type="text" value="Open Market Payment"/>				
Document URL: <input type="text" value="http://payment.openmarket.com/ben/nph-payment"/>				
<div><div>Open Market Payment</div><p>You have selected an item that requires payment</p><p>Merchant: Test Merchant Description: Head Data Central Article Amount: 2.85 (US currency)</p><p>If you have an Open Market account click on "continue" below and you will be prompted for your account name and password. If you do not have an account, you can establish one on-line and return to this page to continue your purchase.</p><p><input type="button" value="Open"/> an account on-line</p><p><input type="button" value="Continue"/> with payment transaction.</p><p>NOTE: For demonstrations use the account name testuser@openmarket.com with the password testuser.</p><hr/><p>Open Market, Inc.</p></div> <div><div>▲</div><div></div><div>▼</div></div>				
Data transfer complete:				
<input type="button" value="Back"/> <input type="button" value="Forward"/> <input type="button" value="Home"/> <input type="button" value="Reload"/> <input type="button" value="Open..."/> <input type="button" value="Save As..."/> <input type="button" value="Clone"/> <input type="button" value="New Window"/> <input type="button" value="Close Window"/>				

FIG. 6

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The screenshot shows a web browser window with a menu bar containing 'File', 'Options', 'Navigate', 'Annotate', and 'Help'. The main content area is titled 'Establish OpenMarket Account' and contains the following fields and text:

Document Title:

Document URL:

Card Number:

Expiration Date: (format MM/YY)

Check the appropriate boxes:

☐ I am the owner of the above credit card.

☐ The above address is also the billing address for this credit card.

Your OpenMarket account statement is available on-line. At your option you may a copy of your statement automatically sent to your e-mail address at weekly or monthly intervals. Please choose a statement option.

☐ Weekly statements ☐ Monthly statements ☐ No e-mail statements

Account name and password

Please choose an account name and password for your OpenMarket account. We suggest using an account name that is unique and easy to remember such as your e-mail address. Your password should be 8 characters or longer.

Account Name

Password

At the bottom of the browser window is a toolbar with buttons: Back, Forward, Home, Reload, Open..., Save As..., Clone, New Window, and Close Window.

FIG. 7

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Document is protected.
Enter username for Open Market Account at payment.openmarket.com:

OK

Cancel

FIG. 8

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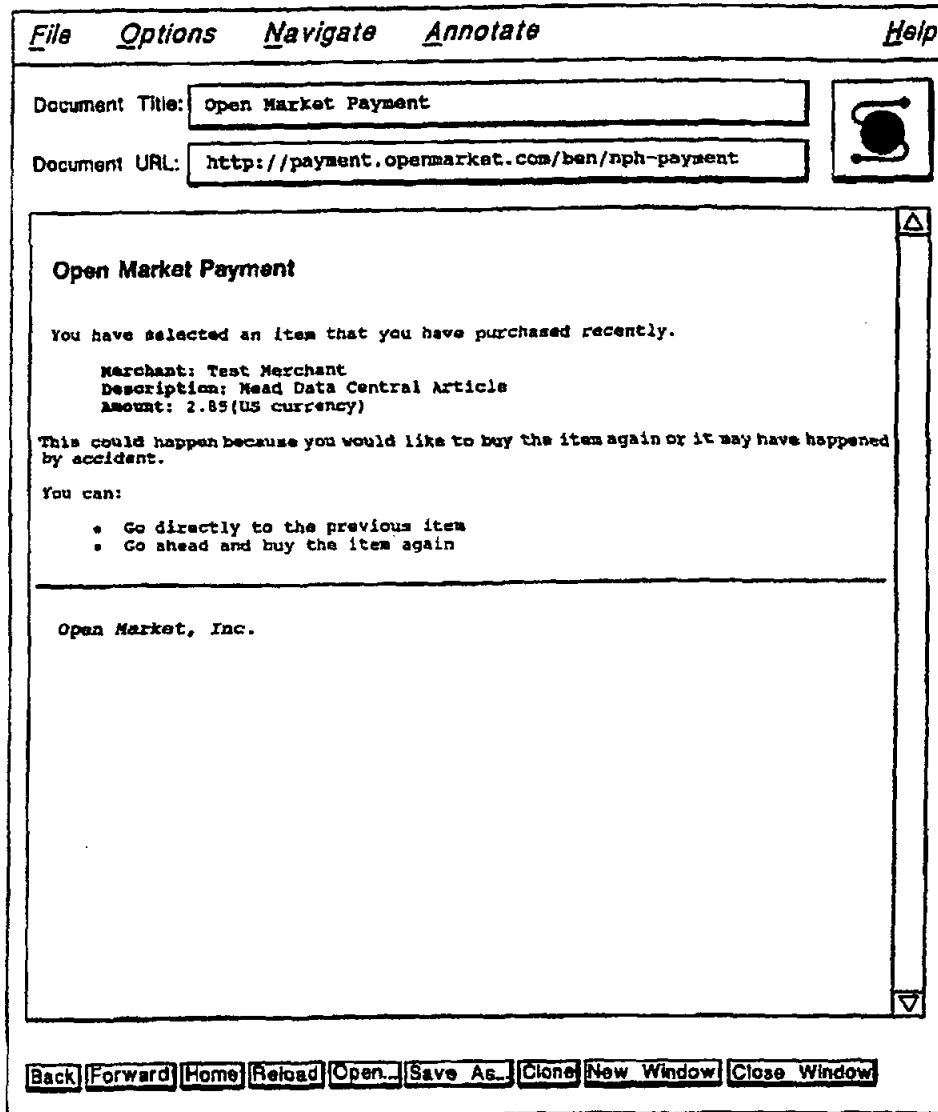


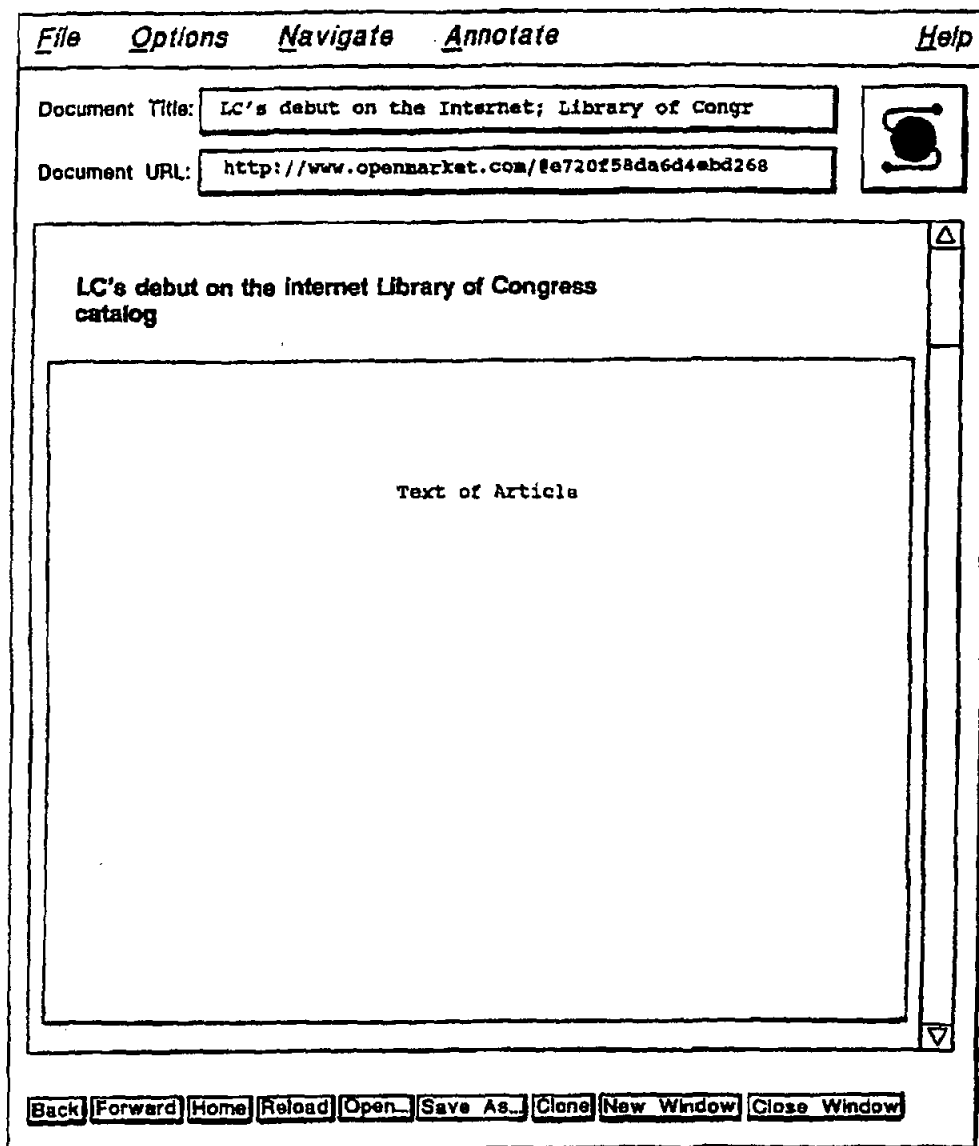
FIG. 9

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<u>File</u>	<u>Options</u>	<u>Navigate</u>	<u>Annotate</u>	<u>Help</u>																																																																	
Document Title: Smart Statement for Test User																																																																					
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<p>Information about the item.</p> <p>Transactions in October 1994</p> <table><tbody><tr><td>Mon Oct 3</td><td>Test Merchant</td><td>Dilbert subscription</td><td>20 seconds</td><td>amount \$0.10</td></tr><tr><td>Tue Oct 4</td><td>Test Merchant</td><td>Head Data</td><td>Central Article</td><td>amount \$2.95</td></tr><tr><td>Tue Oct 4</td><td>Test Merchant</td><td>Head Data</td><td>Central Article</td><td>amount \$2.95</td></tr><tr><td>Tue Oct 4</td><td>Test Merchant</td><td>Head Data</td><td>Central Article</td><td>amount \$2.95</td></tr><tr><td>Tue Oct 4</td><td>Test Merchant</td><td>N.Y. Times</td><td>Article</td><td>amount \$0.50</td></tr><tr><td>Tue Oct 4</td><td>Test Merchant</td><td>Head Data</td><td>Central Article</td><td>amount \$2.95</td></tr><tr><td>Wed Oct 5</td><td>Test Merchant</td><td>Head Data</td><td>Central Article</td><td>amount \$2.95</td></tr><tr><td>Wed Oct 5</td><td>Test Merchant</td><td>Head Data</td><td>Central Article</td><td>amount \$2.95</td></tr><tr><td>Wed Oct 5</td><td>Test Merchant</td><td>Head Data</td><td>Central Article</td><td>amount \$2.95</td></tr><tr><td>Wed Oct 5</td><td>Test Merchant</td><td>Head Data</td><td>Central Article</td><td>amount \$2.95</td></tr><tr><td>Wed Oct 5</td><td>Test Merchant</td><td>Head Data</td><td>Central Article</td><td>amount \$2.95</td></tr><tr><td>Wed Oct 5</td><td>Test Merchant</td><td>Head Data</td><td>Central Article</td><td>amount \$2.95</td></tr><tr><td>Wed Oct 5</td><td>Test Merchant</td><td>Head Data</td><td>Central Article</td><td>amount \$2.95</td></tr></tbody></table> <p>Your total is 33.05.</p> <p>Previous Statements</p> <ul style="list-style-type: none">• September 1994• August 1994 <p>Return to your Newest Statement</p> <p>Feedback</p> <p>You can send us comments and suggestions here.</p>					Mon Oct 3	Test Merchant	Dilbert subscription	20 seconds	amount \$0.10	Tue Oct 4	Test Merchant	Head Data	Central Article	amount \$2.95	Tue Oct 4	Test Merchant	Head Data	Central Article	amount \$2.95	Tue Oct 4	Test Merchant	Head Data	Central Article	amount \$2.95	Tue Oct 4	Test Merchant	N.Y. Times	Article	amount \$0.50	Tue Oct 4	Test Merchant	Head Data	Central Article	amount \$2.95	Wed Oct 5	Test Merchant	Head Data	Central Article	amount \$2.95	Wed Oct 5	Test Merchant	Head Data	Central Article	amount \$2.95	Wed Oct 5	Test Merchant	Head Data	Central Article	amount \$2.95	Wed Oct 5	Test Merchant	Head Data	Central Article	amount \$2.95	Wed Oct 5	Test Merchant	Head Data	Central Article	amount \$2.95	Wed Oct 5	Test Merchant	Head Data	Central Article	amount \$2.95	Wed Oct 5	Test Merchant	Head Data	Central Article	amount \$2.95
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<table border="1"><tr><td>Back</td><td>Forward</td><td>Home</td><td>Reload</td><td>Open...</td><td>Save As...</td><td>Clone</td><td>New Window</td><td>Close Window</td></tr></table>					Back	Forward	Home	Reload	Open...	Save As...	Clone	New Window	Close Window																																																								
Back	Forward	Home	Reload	Open...	Save As...	Clone	New Window	Close Window																																																													

FIG. 11

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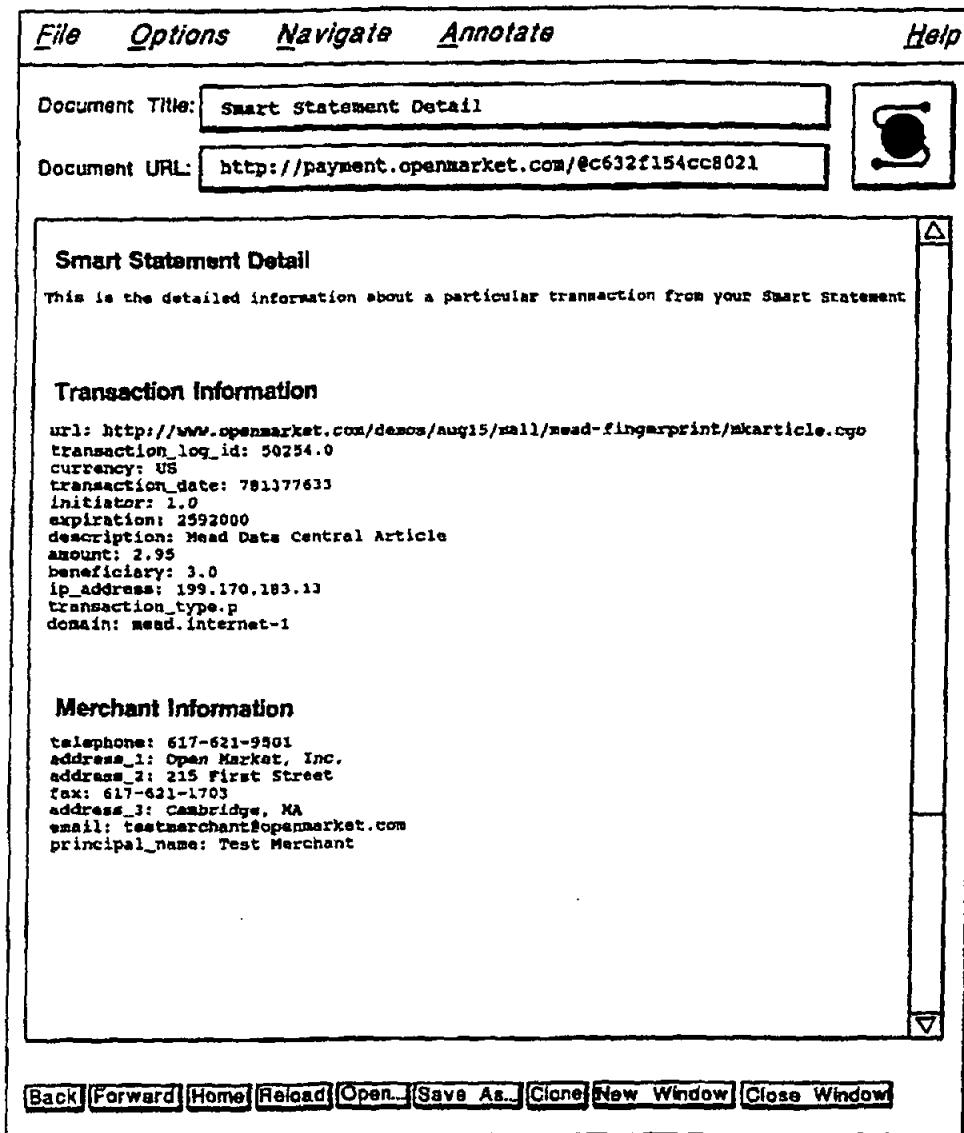


FIG. 12

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<u>F</u> ile	<u>O</u> ptions	<u>N</u> avigate	<u>A</u> nnotate	<u>H</u> elp
Document Title: <input type="text" value="Smart Statement Detail"/>				
Document URL: <input type="text" value="http://payment.openmarket.com/8c632f154cc8021"/>				
<div><p>url: http://www.openmarket.com/demos/aug15/mall/mead-fingerprint/mkarticle.cgo transaction_log_id: 50254.0 currency: US transaction_date: 781377633 initiator: 1.0 expiration: 2592000 description: Mead Data Central Article amount: 2.95 beneficiary: 3.0 ip_address: 199.170.183.13 transaction_type: p domain: mead.internet-1</p><p>Merchant Information</p><p>telephone: 617-621-9501 address_1: Open Market, Inc. address_2: 215 First Street fax: 617-621-1703 address_3: Cambridge, MA email: testmerchant@openmarket.com principal_name: Test Merchant home_url: country: US postal_code: 02142</p><p>Feedback</p><p>You can send us comments and suggestions here.</p></div>				
<div>BackForwardHomeReloadOpen...Save As...CloneNew WindowClose Window</div>				

FIG. 13

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The screenshot shows a web browser window with a menu bar containing File, Options, Navigate, Annotate, and Help. Below the menu bar, there are two input fields: "Document Title:" with the text "Open Market Feedback" and "Document URL:" with the text "http://payment.openmarket.com/ben/feedback.cg". To the right of these fields is a small icon of a person with a speech bubble. Below the input fields is a text block that reads: "Or if you prefer, you can send your comments via electronic mail to feedback@openmarket.com or via FAX to +1.617.621.1703. If you would like a reply please include your e-mail address." Below this text are three input fields: "Your Open Market account name (optional):", "Your E-mail address (optional):", and "Subject:". Below these is a large text area for "Your comments:" with a vertical scrollbar on the right and horizontal scrollbars at the bottom. At the bottom of the form is a "Submit Feedback" button. At the very bottom of the browser window is a status bar with buttons: Back, Forward, Home, Reload, Open..., Save As..., Clone, New Window, and Close Window.

File Options Navigate Annotate Help

Document Title: Open Market Feedback

Document URL: http://payment.openmarket.com/ben/feedback.cg

Or if you prefer, you can send your comments via electronic mail to feedback@openmarket.com or via FAX to +1.617.621.1703. If you would like a reply please include your e-mail address.

Your Open Market account name (optional):

Your E-mail address (optional):

Subject:

Your comments:

Submit Feedback

Back Forward Home Reload Open... Save As... Clone New Window Close Window

FIG. 14

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NETWORK SALES SYSTEM

REFERENCES TO APPENDICES

Microfiche appendices A-G, 4 sheets of 192 images total, are being submitted with the present application.

A claim of copyright is hereby made by Open Market, Incorporated with respect to the software code contained in the microfiche appendices, as of the date of first issuance of a U.S. patent based on this application. The copyright owner has no objection to the facsimile reproduction by anyone of the microfiche appendices as they appear in the Patent and Trademark office patent file or records, but reserves all other copyright rights whatsoever.

This invention relates to user-interactive network sales systems for implementing an open marketplace for goods or services over computer networks such as the Internet.

U.S. patent application Ser. No. 08/168,519, filed Dec. 16, 1993 by David K. Gifford and entitled "Digital Active Advertising," the entire disclosure of which is hereby incorporated herein in its entirety by reference, now abandoned, describes a network sales system that includes a plurality of buyer computers, a plurality of merchant computers, and a payment computer. A user at a buyer computer asks to have advertisements displayed, and the buyer computer requests advertisements from a merchant computer, which sends the advertisements to the buyer computer. The user then requests purchase of an advertised product, and the buyer computer sends a purchase message to the merchant computer. The merchant computer constructs a payment order that it sends to the payment computer, which authorizes the purchase and sends an authorization message to the merchant computer. When the merchant computer receives the authorization message it sends the product to the buyer computer.

The above-mentioned patent application also describes an alternative implementation of the network sales system in which, when the user requests purchase of an advertised product, the buyer computer sends a payment order directly to the payment computer, which sends an authorization message back to the buyer computer that includes an unforgeable certificate that the payment order is valid. The buyer computer then constructs a purchase message that includes the unforgeable certificate and sends it to the merchant computer. When the merchant computer receives the purchase request it sends the product to the buyer computer, based upon the pre-authorized payment order.

SUMMARY OF THE INVENTION

In one aspect, the invention provides a network-based sales system that includes at least one buyer computer for operation by a user desiring to buy a product, at least one merchant computer, and at least one payment computer. The buyer computer, the merchant computer, and the payment computer are interconnected by a computer network. The buyer computer is programmed to receive a user request for purchasing a product, and to cause a payment message to be sent to the payment computer that comprises a product identifier identifying the product. The payment computer is programmed to receive the payment message, to cause an access message to be created that comprises the product identifier and an access message authenticator based on a cryptographic key, and to cause the access message to be sent to the merchant computer. The merchant computer is programmed to receive the access message, to verify the access message authenticator to ensure that the access message authenticator was created using the cryptographic

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key, and to cause the product to be sent to the user desiring to buy the product.

The invention provides a simple design architecture for the network sales system that allows the merchant computer to respond to payment orders from the buyer computer without the merchant computer having to communicate directly with the payment computer to ensure that the user is authorized to purchase the product and without the merchant computer having to store information in a database regarding which buyers are authorized to purchase which products. Rather, when the merchant computer receives an access message from the buyer computer identifying a product to be purchased, the merchant computer need only check the access message to ensure that it was created by the payment computer (thereby establishing for the merchant computer that the buyer is authorized to purchase the product), and then the merchant computer can cause the product to be sent to the buyer computer who has been authorized to purchase the product.

In another aspect, the invention features a network-based sales system that includes at least one buyer computer for operation by a user desiring to buy products, at least one shopping cart computer, and a shopping cart database connected to the shopping cart computer. The buyer computer and the shopping cart computer are interconnected by a computer network. The buyer computer is programmed to receive a plurality of requests from a user to add a plurality of respective products to a shopping cart in the shopping cart database, and, in response to the requests to add the products, to send a plurality of respective shopping cart messages to the shopping cart computer each of which includes a product identifier identifying one of the plurality of products. The shopping cart computer is programmed to receive the plurality of shopping cart messages, to modify the shopping cart in the shopping cart database to reflect the plurality of requests to add the plurality of products to the shopping cart, and to cause a payment message associated with the shopping cart to be created. The buyer computer is programmed to receive a request from the user to purchase the plurality of products added to the shopping cart and to cause the payment message to be activated to initiate a payment transaction for the plurality of products added to the shopping cart.

In another aspect, the invention features a network-based link message system that includes at least one client computer for operation by a client user and at least one server computer for operation by a server user. The client computer and the server computer are interconnected by a computer network. The client computer is programmed to send an initial link message to the server computer. The server computer is programmed to receive the initial link message from the client computer and to create, based on information contained in the initial link message, a session link message that encodes a state of interaction between the client computer and the server computer. The session link message includes a session link authenticator, computed by a cryptographic function of the session link contents, for authenticating the session link message. The server computer is programmed to cause the session link message to be sent to the client computer. The client computer is programmed to cause the session link message to be sent to a computer in the network that is programmed to authenticate the session link message by examining the session link authenticator and that is programmed to respond to the session link message based on the state of the interaction between the client computer and the server computer.

In another aspect, the invention features a network-based sales system that includes a merchant database having a

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plurality of digital advertisements and a plurality of respective product fulfillment items, at least one creation computer for creating the merchant database, and at least one merchant computer for causing the digital advertisements to be transmitted to a user and for causing advertised products to be transmitted to the user. The creation computer and the merchant computer are interconnected by a computer network. The creation computer is programmed to create the merchant database, and to transmit the digital advertisements and the product fulfillment items to the merchant computer. The merchant computer is programmed to receive the digital advertisements and product fulfillment items, to receive a request for a digital advertisement from a user, to cause the digital advertisement to be sent to the user, to receive from the user an access message identifying an advertised product, and to cause the product to be sent to the user in accordance with a product fulfillment item corresponding to the product.

In another aspect, the invention features a hypertext statement system that includes a client computer for operation by a client user and one or more server computers for operation by a server user. The client computer and the server computers are interconnected by a computer network. At least one of the server computers is programmed to record purchase transaction records in a database. Each of the purchase transaction records includes a product description. The server computer is programmed to transmit a statement document that includes the purchase transaction records to the client computer. The client computer is programmed to display the product descriptions, to receive a request from the client user to display a product corresponding to a product description displayed by the client computer, and to cause a product hypertext link derived from a purchase transaction record to be activated. At least one of the server computers is programmed to respond to activation of the product hypertext link by causing the product to be sent to the client computer.

In another aspect, the invention features a network payment system that includes at least one buyer computer for operation by a user desiring to buy a product and at least one payment computer for processing payment messages from the buyer computer. The buyer computer and the payment computer are interconnected by a computer network. The buyer computer is programmed to cause a payment message to be sent to the payment computer. The payment message includes a product identifier identifying the product that the user desires to buy. The payment computer is programmed to receive the payment message, to cause an access message to be created to enable the user to access the product, and to record a purchase transaction record in the settlement database. The buyer computer is programmed to cause a request for purchase transaction records to be sent to the payment computer. The payment computer is programmed to receive the request for purchase transaction records and to cause a document derived from the purchase transaction records to be sent to the buyer computer.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a block diagram of a network sales system in accordance with the present invention.

FIG. 2 (2-A through 2-I) is a flowchart diagram illustrating the operation of a purchase transaction in the network sales system of FIG. 1.

FIG. 3 (3-A through 3-B) is a flowchart diagram illustrating the use of a shopping cart for the purchase of products in connection with the network sales system of FIG. 1.

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FIG. 4 (4-A through 4-C) is a flowchart diagram illustrating the operation of a smart statement in the network sales system of FIG. 1.

FIG. 5 is a screen snapshot of an advertising document that the merchant computer sends to the buyer computer in FIG. 2.

FIG. 6 is a screen snapshot of a confirmation document that the payment computer sends to the buyer computer in FIG. 2.

FIG. 7 is a screen snapshot of a new account document that the payment computer sends to the buyer computer in FIG. 2.

FIG. 8 is a screen snapshot of an account name prompt that the buyer computer creates in FIG. 2.

FIG. 9 is a screen snapshot of a document that the payment computer sends to the buyer computer in FIG. 2 and that provides an option either to repurchase or to use a previously purchased access.

FIG. 10 is a screen snapshot of a fulfillment document that the merchant computer sends to the buyer computer in FIG. 2.

FIG. 11 is a screen snapshot of a smart statement document that the payment computer sends to the buyer computer in FIG. 4.

FIGS. 12 and 13 are screen snapshots of a transaction detail document that the payment computer sends to the buyer computer in FIG. 4.

FIG. 14 is a screen snapshot of a customer service form that the payment computer sends to the buyer computer in FIG. 4.

DETAILED DESCRIPTION

With reference to FIG. 1, a network sales system in accordance with the present invention includes a buyer computer 12 operated by a user desiring to buy a product, a merchant computer 14, which may be operated by a merchant willing to sell products to the buyer or by a manager of the network sales system, a payment computer 16 typically operated by a manager of the network sales system, and a creation computer 20 typically operated by the merchant. The buyer, merchant, payment, and creation computers are all inter-connected by a computer network 10 such as the Internet.

Creation computer 20 is programmed to build a "store" of products for the merchant. A printout of a computer program for use in creating such a "store" in accordance with the present invention is provided as Appendix F.

The products advertised by merchant computer 14 may be, for example, newspaper or newsletter articles available for purchase by buyers. Creation computer 20 creates a digital advertisement database 18 that stores advertising documents (which may for example be in the form of summaries of newspaper or newsletter articles, accompanied by prices) and product fulfillment items (which may be the products themselves if the products can be transmitted over the network, or which may be hard goods identifiers if the products are hard goods, i.e., durable products as opposed to information products). Creation computer 20 transmits contents of the advertising document database 18 to merchant computer 14 to enable the merchant computer to cause advertisements and products to be sent to buyers. Merchant computer 14 maintains advertising documents locally in advertising document database 15. In an alternative embodiment, the creation computer does not have a local digital advertisement database, but instead updates a remote

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advertising document database on a merchant computer. These updates can be accomplished using HTML forms or other remote database technologies as is understood by practitioners of the art.

Payment computer 16 has access to a settlement database 22 in which payment computer 16 can record details of purchase transactions. The products may be organized into various "domains" of products, and payment computer 16 can access settlement database 22 to record and retrieve records of purchases of products falling within the various domains. Payment computer 16 also has access to a shopping cart database 21 in which a "shopping cart" of products that a user wishes to purchase can be maintained as the user shops prior to actual purchase of the contents of the shopping cart.

With reference to FIG. 2, a purchase transaction begins when a user at buyer computer 12 requests advertisements (step 24) and buyer computer 12 accordingly sends an advertising document URL (universal resource locator) to merchant computer 14 (step 26). The merchant computer fetches an advertising document from the advertising document database (step 28) and sends it to the buyer computer (step 30). An example of an advertising document is shown in FIG. 5. Details of URLs and how they are used are found in the microfiche Appendix G.

The user browses through the advertising document and eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34). Payment URL A includes a product identifier that represents the product the user wishes to buy, a domain identifier that represents a domain of products to which the desired product belongs, a payment amount that represents the price of the product, a merchant computer identifier that represents merchant computer 14, a merchant account identifier that represents the particular merchant account to be credited with the payment amount, a duration time that represents the length of time for which access to the product is to be granted to the user after completion of the purchase transaction, an expiration time that represents a deadline beyond which this particular payment URL cannot be used, a buyer network address, and a payment URL authenticator that is a digital signature based on a cryptographic key. The payment URL authenticator is a hash of other information in the payment URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.

In an alternative embodiment, step 34 consists of the buyer computer sending a purchase product message to the merchant computer, and the merchant computer provides payment URL A to the buyer computer in response to the purchase product message. In this alternative embodiment, payment URL A contains the same contents as above. The buyer computer then sends the payment URL A it has received from the merchant computer to the payment computer.

When the payment computer receives the payment URL it verifies whether the payment URL authenticator was created from the contents of the payment URL using the cryptographic key (step 36). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 38). Otherwise, the payment computer determines whether the expiration time has past (step 40). If it has, the payment computer sends a document to the buyer computer indicating that the time has expired (step 41). Otherwise, the payment computer checks the buyer computer network

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address to see if it matches the one specified in the payment URL (step 42). If it does not match, the payment computer sends a document to the buyer computer indicating that access to the network payment system is denied (step 43).

Otherwise, the payment computer sends a payment confirmation document to the buyer computer, the payment confirmation document including an "open" link and a "continue" link (step 44).

An example of a confirmation document is shown in FIG. 6. The confirmation document asks the user to click on a "continue" button if the user already has an account with the payment computer, or to click on an "open" button if the user does not already have an account and wishes to open one.

If the user clicks on the "open" button (step 46), the buyer computer sends payment URL C to the payment computer (step 48), payment URL C being similar to payment URL A but also indicating that the user does not yet have an account. The payment computer creates a new account document (step 50) and sends it to the buyer computer (step 52). An example of a new account document is shown in FIG. 7. When the user receives the new account document he enters the new account name, an account password, a credit card number, the credit card expiration date, and security information such as the maiden name of the user's mother (step 54), and presses a "submit" button (not shown in FIG. 7). The buyer computer sends the new account information to the payment computer (step 56), which enters the new account in the settlement database (step 58).

If the user clicks on the "continue" button (step 60), the buyer computer sends payment URL B to the payment computer (step 62), payment URL B being similar to payment URL A but also indicating that the user already has an account. The payment computer then instructs the buyer computer to provide the account name and password (steps 64 and 66), and the buyer computer prompts the user for this information by creating an account name prompt (example shown in FIG. 8) and a similar password prompt. The user enters the information (step 68) and the buyer computer sends the account name and password to the payment computer (step 70).

The payment computer verifies whether the user name and password are correct (step 72). If they are not correct, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 74). Otherwise, the payment computer determines whether additional security is warranted, based on, e.g., whether the payment amount exceeds a threshold (step 73). If additional security is warranted, the payment computer creates a challenge form document and sends it to the buyer computer (step 75). The user enters the security information (step 77), the buyer computer sends the security information to the payment computer (step 79), and the payment computer determines whether the security information is correct (step 81). If it is not correct, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 83).

If the security information is correct, or if additional security was not warranted, the payment computer checks the settlement database to determine whether the user has unexpired access to the domain identifier contained in the payment URL (step 82). If so, the payment computer sends to the buyer computer a document providing an option either to repurchase or to use the previously purchased access (step 84). An example of such a document is shown in FIG. 9. The

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user can respond to the recent purchase query document by choosing to access the previously purchased document (step 85) or to go ahead and buy the currently selected product (step 86).

If the user chooses to access the previously purchased document, the buyer computer skips to step 92 (see below). If the user chooses to buy the currently selected product, the payment computer calculates an actual payment amount that may differ from the payment amount contained in the payment URL (step 87). For example, the purchase of a product in a certain domain may entitle the user to access other products in the domain for free or for a reduced price for a given period of time.

The payment computer then verifies whether the user account has sufficient funds or credit (step 76). If not, the payment computer sends a document to the buyer computer indicating that the user account has insufficient funds (step 78). Otherwise, the payment computer creates an access URL (step 80) that includes a merchant computer identifier, a domain identifier, a product identifier, an indication of the end of the duration time for which access to the product is to be granted, the buyer network address, and an access URL authenticator that is a digital signature based on a cryptographic key. The access URL authenticator is a hash of other information in the access URL, the hash being defined by a key shared by the merchant and the operator of the payment computer. The payment computer then records the product identifier, the domain, the user account, the merchant account, the end of duration time, and the actual payment amount in the settlement database (step 88).

The payment computer then sends a redirect to access URL to the buyer computer (step 90), which sends the access URL to the merchant computer (step 92). The merchant computer verifies whether the access URL authenticator was created from the contents of the access URL using the cryptographic key (step 94). If not, the merchant computer sends a document to the buyer computer indicating that access to the product is denied (step 96).

Otherwise, the merchant computer verifies whether the duration time for access to the product has expired (step 98). This is done because the buyer computer can request access to a purchased product repeatedly. If the duration time has expired, the merchant computer sends a document to the buyer computer indicating that the time has expired (step 100). Otherwise the merchant computer verifies that the buyer computer network address is the same as the buyer network address in the access URL (step 101), and if so, sends a fulfillment document to the buyer computer (step 102), which is displayed by the buyer computer (step 104). An example of a fulfillment document is shown in FIG. 10. Otherwise, the merchant computer sends a document to the buyer computer indicating that access is not allowed (step 103).

With reference now to FIG. 3, when the merchant computer sends the advertising document to the buyer computer, the user may request that a product be added to a shopping cart in the shopping cart database rather than request that the product be purchased immediately. The buyer computer sends a shopping cart URL to the payment computer (step 108), the shopping cart URL including a product identifier, a domain identifier, a payment amount, a merchant computer identifier, a merchant account identifier, a duration time, an expiration time, and a shopping cart URL authenticator that is a digital signature based on a cryptographic key. The shopping cart URL authenticator is a hash of other information in the shopping cart URL, the hash being defined by

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a key shared by the merchant and the operator of the payment computer.

The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).

The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).

With reference now to FIG. 4, a user can request display of a "smart statement" that lists purchase transactions for a given month (step 128). When the buyer computer receives such a request, it sends a smart statement URL to the payment computer (step 130).

When the payment computer receives the smart statement URL, it verifies whether the smart statement URL authenticator was created from the contents of the smart statement URL using a cryptographic key (step 132). If not, the payment computer sends a document to the buyer computer indicating that access is denied (step 134). Otherwise, the payment computer checks to determine whether the buyer network address in the smart statement URL matches the buyer computer's actual network address (step 136). If not, the payment computer sends a document to the buyer computer indicating that access is denied (step 138). Otherwise (step 140), the payment computer and buyer computer perform a set of steps analogous to steps 64-81 in FIG. 2 (payment computer requests account name and password, user provides the requested information, and payment computer verifies the information).

In an alternative embodiment steps 132-138 are omitted.

After verification of account information is complete, the payment computer retrieves the requested settlement data from the settlement database, creates a smart statement document for the buyer, and sends the smart statement document to the buyer computer (step 142). An example of a smart statement document is shown in FIG. 11. Each purchase transaction record in the smart statement document includes the data of the transaction, the name of the merchant, an identification of the product, and the payment amount for the product. The smart statement document also includes a transaction detail URL for each purchase transaction (these URLs, or hypertext links, are discussed below and are not shown in FIG. 11). The smart statement docu-

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ment also identifies previous statements that the user may wish to have displayed.

The buyer computer displays the retrieved document (step 144), and the user may request transaction details for a particular transaction listed on the smart statement (step 146). If so, the buyer computer sends a transaction detail URL (or "payment detail URL") to the payment computer (step 148). The transaction detail URL includes a transaction identifier, a buyer network address, and a transaction detail URL authenticator. When the payment computer receives the transaction detail URL, it performs (step 150) a set of steps analogous to steps 132-140 (verification of URL authenticator, buyer network address, and account information). The payment computer then retrieves from the settlement database data corresponding to the payment transaction specified in the transaction detail URL, creates a transaction detail document, and sends it to the buyer computer (step 152).

An example of a transaction detail document is shown in FIGS. 12 and 13. The document displays a number of items of information about the transaction, including the transaction date, end of the duration time ("expiration"), a description of the product, the payment amount, the domain corresponding to the product, an identification of the merchant, and the merchant's address.

The smart statement document and the transaction detail document both include customer service URLs (hypertext links) that allow the user to request customer service (i.e., to send comments and suggestions to the payment computer). When the user requests customer service (step 154), the buyer computer sends the customer service URL to the payment computer (step 156), which creates a customer service form and sends it to the buyer computer (step 158). An example of a customer service form is shown in FIG. 14. The user types comments into the customer service form (step 160), and the buyer computer sends the user's comments to the payment computer (step 162). The payment computer then posts the user comments and sends a thank you document to the buyer computer (step 164).

A user may request display of a product included in the smart statement. When the user requests that the product be displayed (step 166), the buyer computer sends the access URL contained in the smart statement document to the merchant computer (step 168), and the buyer computer and merchant computer perform a set of steps analogous to steps 94-104 in FIG. 2 (authentication of access URL, verification whether duration time has expired, verification of buyer network address, and transmission of fulfillment document to buyer computer).

Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link" which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents).

When the present application states that one computer sends a document to another computer, it should be understood that in preferred embodiments the document is a success HTTP response message with the document in the

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body of the message. When the present application states that a server sends an account name and password request message to the client, it should be understood that in preferred embodiments the account name and password request message is an unauthorized HTTP response. A client computer sends account name and password information to a server as part of a request message with an authorization field.

The software architecture underlying the particular preferred embodiment is based upon the hypertext conventions of the World Wide Web. Appendix A describes the Hypertext Markup Language (HTML) document format used to represent digital advertisements. Appendix B describes the HTML forms fill out support in Mosaic 2.0. Appendix C is a description of the Hypertext Transfer Protocol (HTTP) between buyer and merchant computers. Appendix D describes how documents are named with Uniform Resource Locators (URLs) in the network of computers, and Appendix E describes the authentication of URLs using digital signatures.

A printout of a computer program for use in creating and operating such a "store" in accordance with the present invention is provided as Appendix F. A printout of a computer program for use in operating other aspects of the network sales system in accordance with the present invention is provided in the microfiche appendix G.

There has been described a new and useful network-based sales system. It is apparent that those skilled in the art may make numerous modifications and departures from the specific embodiments described herein without departing from the spirit and scope of the claimed invention.

What is claimed is:

1. A network-based sales system, comprising:

at least one buyer computer for operation by a user desiring to buy a product;

at least one merchant computer; and

at least one payment computer;

said buyer computer, said merchant computer, and said payment computer being interconnected by a computer network;

said buyer computer being programmed to receive a user request for purchasing a product, and to cause a payment message to be sent to said payment computer that comprises a product identifier identifying said product; said payment computer being programmed to receive said payment message, to cause an access message to be created that comprises said product identifier and an access message authenticator based on a cryptographic key, and to cause said access message to be sent to said merchant computer; and

said merchant computer being programmed to receive said access message, to verify said access message authenticator to ensure that said access message authenticator was created using said cryptographic key, and to cause said product to be sent to said user desiring to buy said product.

2. A network-based sales system in accordance with claim 1, wherein said payment message and said access message each comprises a universal resource locator.

3. A network-based sales system in accordance with claim 1, wherein said payment computer is programmed to identify said merchant computer upon receipt of said payment message from said buyer computer.

4. A network-based sales system in accordance with claim 1, wherein said access message comprises a buyer network address.

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5. A network-based sales system in accordance with claim 4, wherein:
 said product can be transmitted from one computer to another; and
 said merchant computer causes said product to be sent to said user by transmitting said product to said buyer network address only.

6. A network-based sales system in accordance with claim 4, wherein said merchant computer is programmed to verify whether said buyer network address in said access message matches the actual network address of said buyer computer.

7. A network-based sales system in accordance with claim 1, wherein said payment message comprises a buyer network address.

8. A network-based sales system in accordance with claim 7, wherein said payment computer is programmed to verify whether said buyer network address in said payment message matches the actual network address of said buyer computer.

9. A network-based sales system in accordance with claim 1, wherein said access message authenticator comprises a cryptographic function of contents of said access message based on said cryptographic key.

10. A network-based sales system in accordance with claim 1, wherein said payment computer is programmed to verify said payment message authenticator to ensure that said payment message authenticator was created using said cryptographic key.

11. A network-based sales system in accordance with claim 10, wherein said payment message authenticator comprises a cryptographic function of contents of said payment message based on said cryptographic key.

12. A network-based sales system in accordance with claim 1, wherein said payment message comprises a payment amount.

13. A network-based sales system in accordance with claim 1, wherein said payment message comprises a merchant account identifier that identifies a merchant account.

14. A network-based sales system in accordance with claim 1, wherein said buyer computer is programmed to transmit a user account identifier to said payment computer that identifies a user account.

15. A network-based sales system in accordance with claim 14, wherein:
 said payment message comprises a payment amount; and
 said payment computer is programmed to ensure that said user account has sufficient funds or credit to cover said payment amount.

16. A network-based sales system in accordance with claim 14, wherein:
 said payment message comprises a payment amount and a merchant account identifier that identifies a merchant account; and
 said payment computer is programmed to record said payment amount, said user account, and said merchant account in a settlement database.

17. A network-based sales system in accordance with claim 16, wherein:
 said payment message comprises a domain identifier; and
 said payment computer is programmed to record said domain identifier and said user account in a settlement database.

18. A network-based sales system in accordance with claim 17, wherein said payment computer is programmed to check said settlement database, upon receipt of said payment message, to determine whether said user account has previously purchased a product associated with said domain identifier.

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19. A network-based sales system in accordance with claim 18, wherein said payment computer is programmed to determine an actual payment amount for said product identified by said product identifier in said payment message based on whether said user account has previously purchased a product associated with said domain identifier.

20. A network-based sales system in accordance with claim 1, wherein said buyer computer is programmed to transmit a user authenticator to said payment computer and said payment computer is programmed to verify said user authenticator.

21. A network-based sales system in accordance with claim 20, wherein said user authenticator comprises a password.

22. A network-based sales system in accordance with claim 20, wherein:
 said buyer computer is programmed to transmit security information to said payment computer;
 said payment computer is programmed to transmit a challenge form to said buyer computer under a predetermined condition, said challenge form asking for said security information previously transmitted by said buyer computer to said payment computer;
 said payment computer is programmed to respond to said challenge form by querying said user for said security information and transmitting said security information to said payment computer; and
 said payment computer is programmed to verify authenticity of said security information.

23. A network-based sales system in accordance with claim 22, wherein:
 said payment message comprises a payment amount; and
 said predetermined condition comprises receipt of a payment amount in said payment message that exceeds a threshold.

24. A network-based sales system in accordance with claim 1, wherein said payment message comprises a merchant computer identifier that identifies said merchant computer.

25. A network-based sales system in accordance with claim 24, wherein said access message comprises said merchant computer identifier.

26. A network-based sales system in accordance with claim 1, wherein said payment message comprises a duration time that specifies a length of time for which access to said product is to be granted.

27. A network-based sales system in accordance with claim 26, wherein said payment computer is programmed to use said duration time to compute an end of duration time and to cause said end of duration time to be included in said access message.

28. A network-based sales system in accordance with claim 27, wherein said merchant computer is programmed to verify, upon receipt of said access message, that said end of duration time has not past.

29. A network-based sales system in accordance with claim 1, wherein said payment message comprises an expiration time after which said payment message can no longer be used.

30. A network-based sales system in accordance with claim 29, wherein said payment computer is programmed to verify, upon receipt of said payment message, that said expiration time has not past.

31. A network-based sales system in accordance with claim 1, wherein:
 said payment computer is programmed to cause said access message to be sent to said buyer computer; and

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said buyer computer is programmed to cause said access message received from said payment computer to be sent to said merchant computer.

32. A network-based sales system, comprising:

at least one buyer computer for operation by a user 5 desiring to buy a product;

at least one merchant computer; and

at least one payment computer;

said buyer computer, said merchant computer, and said payment computer being interconnected by a computer 10 network;

said buyer computer being programmed to receive a user request for purchasing a product, and to cause a payment URL to be sent to said payment computer that comprises a product identifier identifying said product, 15 a payment amount, and a payment URL authenticator comprising a cryptographic function of contents of said payment URL based on a cryptographic key;

said payment computer being programmed to receive said payment URL, to verify said payment URL authenticator to ensure that said payment URL authenticator 20 was created using said cryptographic key, to ensure that said user has sufficient funds or credit to cover said payment amount, to identify said merchant computer operated by said merchant willing to sell said product to said buyer, to cause an access URL to be created that 25 comprises said product identifier and an access URL authenticator comprising a cryptographic function of contents of said access URL based on a cryptographic key, and to cause said access URL to be sent to said buyer computer;

said buyer computer being programmed to cause said access URL received from said payment computer to be sent to said merchant computer; and

said merchant computer being programmed to receive said access URL, to verify said access URL authenticator to ensure that said access URL authenticator was created using said cryptographic key, and to cause said product to be sent to said user desiring to buy said 30 product.

33. A method of operating a payment computer in a computer network comprising at least one buyer computer for operation by a user desiring to buy a product, at least one merchant computer, and at least one payment computer, the method comprising the steps of:

receiving, at said payment computer, a payment message that said buyer computer has caused to be sent to said payment computer in response to a user request for purchasing a product, said payment message comprising a product identifier identifying said product; 35

causing an access message to be created that comprises said product identifier and an access message authenticator based on a cryptographic key; and

causing said access message to be sent to said merchant computer, said merchant computer being programmed to receive said access message, to verify said access message authenticator to ensure that said access message authenticator was created using said cryptographic key, and to cause said product to be sent to said user desiring to buy said product. 40

34. A network-based sales system, comprising:

at least one buyer computer for operation by a user desiring to buy products;

at least one shopping cart computer; and

a shopping cart database connected to said shopping cart computer; 45

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said buyer computer and said shopping cart computer being interconnected by a computer network;

said buyer computer being programmed to receive a plurality of requests from a user to add a plurality of respective products to a shopping cart in said shopping cart database, and, in response to said requests to add said products, to send a plurality of respective shopping cart messages to said shopping cart computer each of which comprises a product identifier identifying one of said plurality of products;

said shopping cart computer being programmed to receive said plurality of shopping cart messages, to modify said shopping cart in said shopping cart database to reflect said plurality of requests to add said plurality of products to said shopping cart, and to cause a payment message associated with said shopping cart to be created; and

said buyer computer being programmed to receive a request from said user to purchase said plurality of products added to said shopping cart and to cause said payment message to be activated to initiate a payment transaction for said plurality of products added to said shopping cart;

said shopping cart being a stored representation of a collection of products, said shopping cart database being a database of stored representations of collections of products, and said shopping cart computer being a computer that modifies said stored representations of collections of products in said database.

35. A network-based sales system in accordance with claim 34, wherein said shopping cart computer is programmed to cause said payment message to be created before said buyer computer causes said payment message to be activated.

36. A network-based sales system in accordance with claim 34, wherein said buyer computer is programmed to receive a request from said user to display said plurality of products added to said shopping cart.

37. A network-based sales system in accordance with claim 36, wherein said buyer computer is programmed to transmit a fetch shopping cart request to said payment computer in response to receipt of said request from said user.

38. A network-based sales system in accordance with claim 37, wherein:

said payment computer is programmed to respond to said fetch shopping cart request by transmitting a message to said buyer computer indicating said plurality of products added to said shopping cart; and

said buyer computer is programmed to display said plurality of products added to said shopping cart.

39. A method of operating a shopping cart computer in a computer network comprising at least one buyer computer for operation by a user desiring to buy products, at least one shopping cart computer, and a shopping cart database connected to said shopping cart computer, said method comprising the steps of:

receiving, at said shopping cart computer, a plurality of shopping cart messages sent to said shopping cart computer by said buyer computer in response to receipt of a plurality of requests from a user to add a plurality of respective products to a shopping cart in said shopping cart database, each of said shopping cart messages comprising a product identifier identifying one of said plurality of products;

modifying said shopping cart in said shopping cart database to reflect said plurality of requests to add said plurality of products to said shopping cart; and

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causing a payment message associated with said shopping cart to be created;

said buyer computer being programmed to receive a request from said user to purchase said plurality of products added to said shopping cart and to cause said payment message to be activated to initiate a payment transaction for said plurality of products added to said shopping cart;

said shopping cart being a stored representation of a collection of products, said shopping cart database being a database of stored representations of collections of products, and said shopping cart computer being a computer that modifies said stored representations of collections of products in said database.

40. A network-based link message system, comprising: at least one client computer for operation by a client user; and

at least one server computer for operation by a server user; said client computer and said server computer being interconnected by a computer network;

said client computer being programmed to send an initial link message to said server computer;

said server computer being programmed to receive said initial link message from said client computer, to create, based on information contained in said initial link message, a session link message that encodes a state of interaction between said client computer and said server computer, said session link message comprising a session link authenticator, computed by a cryptographic function of said session link contents, for authenticating said session link message, and to cause said session link message to be sent to said client computer;

said client computer being programmed to cause said session link message to be sent to a computer in said network that is programmed to authenticate said session link message by examining said session link authenticator and that is programmed to respond to said session link message based on said state of said interaction between said client computer and said server computer.

41. A network-based link message system in accordance with claim 40, wherein:

said client computer comprises a buyer computer for operation by a user desiring to buy a product;

said server computer comprises a payment computer for operation by a manager of said network-based link message system; and

said network-based link message system further comprises a merchant computer for operation by a merchant willing to sell said product to said buyer.

42. A network-based link message system in accordance with claim 41, wherein said computer that is programmed to

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authenticate said session link message comprises said merchant computer.

43. A network-based link message system in accordance with claim 41, wherein said initial link message comprises a payment message to said payment computer that comprises a product identifier identifying said product.

44. A network-based link message system in accordance with claim 43, wherein said session link message comprises an access message that comprises said product identifier to be created.

45. A network-based link message system in accordance with claim 44, wherein said merchant computer is programmed to respond to said access message by causing said product to be sent to said user desiring to buy said product.

46. A network-based link message system in accordance with claim 40, wherein said initial link message and said session link message comprise universal resource locators.

47. A network-based link message system in accordance with claim 40, wherein:

said session link authenticator comprises a cryptographic function of contents of said session link message based on a cryptographic key; and

said computer to which said client computer is programmed to cause said session link message to be sent is programmed to verify that said session link authenticator was created using said cryptographic key.

48. A method of operating a server computer in a network-based link message system comprising at least one client computer for operation by a client user and at least one server computer for operation by a server user, said client computer and said server computer being interconnected by a computer network, said method comprising the steps of:

receiving, at said server computer, an initial link message sent to said server computer by said client computer;

creating, based on information contained in said initial link message, a session link message that encodes a state of interaction between said client computer and said server computer, said session link message comprising a session link authenticator, computed by a cryptographic function of said session link contents, for authenticating said session link message; and

causing said session link message to be sent to said client computer;

said client computer being programmed to cause said session link message to be sent to a computer in said network that is programmed to authenticate said session link message by examining said session link authenticator and that is programmed to respond to said session link message based on said state of said interaction between said client computer and said server computer.

* * * * *

EXHIBIT B



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(12) **EX PARTE REEXAMINATION CERTIFICATE (5932nd)**
United States Patent
Payne et al.

(10) Number: **US 5,715,314 C1**(45) Certificate Issued: ***Oct. 9, 2007**(54) **NETWORK SALES SYSTEM**

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(*) Notice: This patent is subject to a terminal dis-
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(57) **ABSTRACT**

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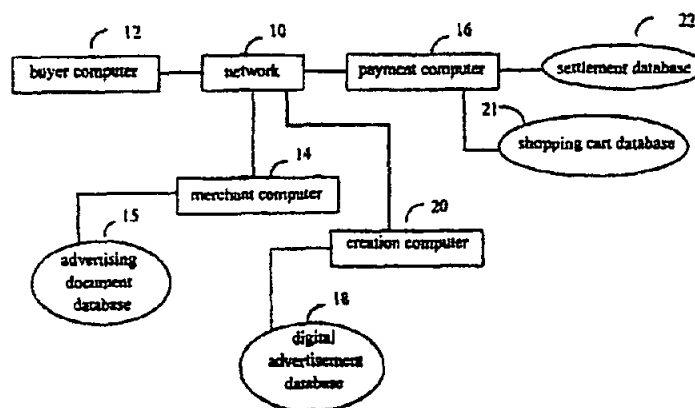
(52) U.S. Cl. **705/78; 705/26; 705/75;**
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(58) Field of Classification Search None
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A network-based sales system includes at least one buyer computer for operation by a user desiring to buy a product, at least one merchant computer, and at least one payment computer. The buyer computer, the merchant computer, and the payment computer are interconnected by a computer network. The buyer computer is programmed to receive a user request for purchasing a product, and to cause a payment message to be sent to the payment computer that comprises a product identifier identifying the product. The payment computer is programmed to receive the payment message, to cause an access message to be created that comprises the product identifier and an access message authenticator based on a cryptographic key, and to cause the access message to be sent to the merchant computer. The merchant computer is programmed to receive the access message, to verify the access message authenticator to ensure that the access message authenticator was created using the cryptographic key, and to cause the product to be sent to the user desiring to buy the product.



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Exhibit 2 of Geringer Declaration: E-mail from Brooks Cutter to Mike Kuniavsky (Jun. 14, 1994).

Exhibit 3 of Geringer Declaration: Excerpts of Deposition of Richard Buake.

Exhibit 5 of Geringer Declaration: Excerpts of Deposition of Andrew Payne.

Exhibit 6 of Geringer Declaration: E-mail from Andrew Payne to Winfield Treese, et al. (Jun. 15, 1994).

Exhibit 7 of Geringer Declaration: Excerpts of Deposition of Winfield Treese.

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**EX PARTE
REEXAMINATION CERTIFICATE
ISSUED UNDER 35 U.S.C. 307**

THE PATENT IS HEREBY AMENDED AS
INDICATED BELOW.

Matter enclosed in heavy brackets [] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in *italics* indicates additions made to the patent.

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

The patentability of claims 1-48 is confirmed.

New claims 49-168 are added and determined to be patentable.

49. A network-based sales system in accordance with claim 34, wherein the buyer computer activates the payment message by transmitting a message to the shopping cart computer that causes the payment message to be activated.

50. A network-based sales system in accordance with claim 34, wherein the network is a public packet switched network.

51. A network-based sales system in accordance with claim 34, wherein the network is an Internet.

52. A network-based sales system in accordance with claim 34, further comprising:

a merchant computer that is interconnected with the buyer computer and shopping cart computer by the computer network; and

an advertising document database;

wherein the merchant computer is programmed to fetch an advertising document from the advertising document database.

53. A network-based sales system in accordance with claim 52, wherein the merchant computer is programmed to send one or more advertising documents to the buyer computer.

54. A network-based sales system in accordance with claim 53, wherein the merchant computer is programmed to provide a product requested by the user.

55. A network-based sales system in accordance with claim 54, wherein the merchant computer is programmed to respond to payment orders from the buyer computer without the merchant computer having to communicate directly with the shopping cart computer to ensure that the user is authorized to purchase the product:

wherein the merchant computer is programmed to respond to payment orders from the buyer computer without the merchant computer having to store information in a database regarding which buyers are authorized to purchase which products.

56. A network-based sales system in accordance with claim 53, wherein the advertisement documents are in the form of summaries of newspaper or newsletter articles;

wherein prior to a user's product request, the merchant computer sends an advertising document to the buyer computer.

57. A network-based sales system in accordance with claim 34, wherein the buyer computer transmits an initial link that comprises information from which the shopping cart computer can create a session link message:

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wherein the session link is transmitted from the shopping cart computer to the buyer computer;

wherein the session link message includes a session link authenticator for use by a computer to authenticate the session link message.

58. A network-based sales system in accordance with claim 57, wherein the session link authenticator is a cryptographic function of the session link contents.

59. A network-based sales system in accordance with claim 58, wherein the buyer computer is programmed to cause the session link message to be sent to a computer in the network which is programmed to authenticate the session link message by examining the session link authenticator and which is programmed to respond to the session link message based on state of the interaction between the buyer computer and the shopping cart computer.

60. A network-based sales system in accordance with claim 34, wherein at least one of the requests comprises a shopping cart URL.

61. A network-based sales system in accordance with claim 60, wherein the shopping cart URL comprises a domain identifier.

62. A network-based sales system in accordance with claim 60, wherein the shopping cart URL comprises a merchant identifier.

63. A network-based sales system in accordance with claim 60, wherein the shopping cart URL comprises a merchant account identifier.

64. A network-based sales system in accordance with claim 60, wherein the shopping cart URL comprises a payment amount.

65. A network-based sales system in accordance with claim 60, wherein the shopping cart URL comprises a product identifier.

66. A network-based sales system in accordance with claim 60, wherein the shopping cart URL comprises a duration time.

67. A network-based sales system in accordance with claim 60, wherein the shopping cart URL comprises an expiration time.

68. A network-based sales system in accordance with claim 67, wherein the shopping cart computer transmits a document to the buyer computer indicating that the expiration time has passed.

69. A network-based sales system in accordance with claim 60, wherein the URL comprises a buyer network address.

70. A network-based sales system in accordance with claim 69, wherein the buyer computer network address is verified by matching it with a network address specified in the shopping cart URL.

71. A network-based sales system in accordance with claim 70, wherein if the computer network address verification fails, then the shopping cart computer sends a document to the buyer computer indicating that access is not allowed.

72. A network-based sales system in accordance with claim 60, wherein the shopping cart URL comprises an authenticator based on a cryptographic key;

wherein the authenticator is a function of contents of the shopping cart URL;

wherein the shopping cart computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key.

73. A network-based sales system in accordance with claim 72, wherein if the verification fails, the shopping cart

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computer transmits a document to the buyer computer indicating that access is denied.

74. A network-based sales system in accordance with claim 34, wherein the buyer computer activates the payment message by transmitting a message to the shopping cart computer that causes the payment message to be activated; wherein the shopping cart computer transmits a payment confirmation document to the buyer computer.

75. A network-based sales system in accordance with claim 74, wherein the payment confirmation document includes an open link and a continue link.

76. A network-based sales system in accordance with claim 75, wherein the shopping cart computer opens a new account in response to the user selecting the open link.

77. A network-based sales system in accordance with claim 76, wherein the buyer computer sends a payment URL to the shopping cart computer that indicates that an account does not yet exist.

78. A network-based sales system in accordance with claim 77, wherein the shopping cart computer creates a new account document.

79. A network-based sales system in accordance with claim 78, wherein the shopping cart computer transmits the new account document to the buyer computer.

80. A network-based sales system in accordance with claim 79, wherein the new account document comprises a challenge form that requests account information to be entered by the user.

81. A network-based sales system in accordance with claim 80, wherein the account information comprises a new account name and account password.

82. A network-based sales system in accordance with claim 80, wherein the account information comprises: a new account name, an account password, a credit card number, and an expiration date of the credit card.

83. A network-based sales system in accordance with claim 80, wherein the account information comprises security information.

84. A network-based sales system in accordance with claim 34, wherein the shopping cart computer, in response to the plurality of shopping cart messages, causes an account name and password request message to be transmitted to the buyer computer.

85. A network-based sales system in accordance with claim 34, further comprising:

a merchant computer that is interconnected with the buyer and shopping cart computers by the computer network; and

an advertising document database;

wherein the merchant computer is programmed to fetch an advertising document from the advertising document database;

wherein the advertising document database is local to the merchant computer.

86. A network-based sales system in accordance with claim 85, wherein a creation computer updates the remote advertising document database on the merchant computer.

87. A network-based sales system in accordance with claim 85, wherein the buyer computer transmits a purchase product message to the merchant computer, and, in response, the merchant computer provides a payment URL to the buyer computer.

88. A network-based sales system in accordance with claim 87, wherein the buyer computer transmits the payment URL to a payment computer.

89. A network-based sales system in accordance with claim 88, wherein the payment computer is the shopping cart computer.

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90. A network-based sales system in accordance with claim 88, wherein the payment URL comprises an authenticator based on a cryptographic key;

wherein the authenticator is a function of contents of the payment URL.

91. A network-based sales system in accordance with claim 90, wherein the payment computer verifies whether the payment URL authenticator was created from the contents of the payment URL using a cryptographic key;

if the verification fails, the payment computer transmits a document to the buyer computer indicating that access is denied.

92. A network-based sales system in accordance with claim 88, wherein the payment URL further comprises an expiration time.

93. A network-based sales system in accordance with claim 92, wherein the payment computer transmits a document to the buyer computer indicating that the expiration time has passed.

94. A network-based sales system in accordance with claim 88, wherein the payment URL comprises a buyer network address.

95. A network-based sales system in accordance with claim 94, wherein the buyer computer network address is verified by matching it with the network address specified in the payment URL;

if the verification fails, then the shopping cart computer sends a document to the buyer computer indicating that access is not allowed.

96. A network-based sales system in accordance with claim 88, wherein the payment computer transmits a payment confirmation document to the buyer computer;

wherein the payment confirmation document includes an open link and a continue link;

wherein in response to the user selecting the continue link, the payment computer instructs the buyer computer to provide an account name and password that have previously been provided by the buyer computer to the payment computer.

97. A network-based sales system in accordance with claim 96, wherein the buyer computer prompts the user for the account name and password by creating an account name prompt and a password prompt.

98. A network-based sales system in accordance with claim 97, wherein the payment computer verifies that the account name and password entered by the user match a previously provided account name and password.

99. A network-based sales system in accordance with claim 98, wherein if the verification fails, then the payment computer sends a document to the buyer computer indicating that access is not allowed.

100. A network-based sales system in accordance with claim 98, wherein if a payment amount exceeds a threshold, then the user is prompted for security information;

wherein the payment computer verifies that the security information matches a previously provided account name and password;

if the verification fails, then the payment computer sends a document to the buyer computer indicating that access is not allowed.

101. A network-based sales system in accordance with claim 98, further comprising a settlement database that is in communication with the payment computer;

wherein the settlement database is used to determine whether the user has unexpired access to a domain identified in the payment message;

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wherein the user is presented with an option to repurchase or to use the unexpired access.

102. A network-based sales system in accordance with claim 101, wherein the purchase of a product in a certain domain by a user account entitles access to other products in the domain for free or at a reduced price.

103. A network-based sales system in accordance with claim 98, wherein the payment computer verifies whether the user account has sufficient funds or credit that satisfies a payment amount specified in the payment message.

if the verification fails, then the payment computer sends a document to the buyer computer indicating that the user has insufficient funds.

104. A network-based sales system in accordance with claim 98, wherein the payment computer records an end of duration time in a settlement database.

105. A network-based sales system in accordance with claim 98, wherein the payment computer creates an access URL including an access URL authenticator that is a digital signature generated based on a cryptographic key;

wherein the access URL authenticator is a hash of other information in the access URL;

wherein the payment computer sends a redirect to the access URL to the buyer computer;

wherein the buyer computer sends the access URL to a merchant computer.

106. A network-based sales system in accordance with claim 105, wherein the merchant computer verifies whether the access URL authenticator was created from said other information in the access URL using the cryptographic key;

if the verification fails, then the merchant computer sends a document to the buyer computer indicating that access is not allowed.

107. A network-based sales system in accordance with claim 105, wherein the merchant computer verifies whether a duration time for access has expired;

if the verification fails, then the merchant computer sends a document to the buyer computer indicating that the duration time has expired.

108. A network-based sales system in accordance with claim 105, wherein the merchant computer verifies that a buyer computer network address is the same as a buyer network address contained in the access URL;

if the verification fails, then the merchant computer sends a document to the buyer computer indicating that access is not allowed.

109. The method of claim 39, wherein the buyer computer activates the payment message by transmitting a message to the shopping cart computer that causes the payment message to be activated.

110. The method of claim 39, wherein the network is a public packet switched network.

111. The method of claim 39, wherein the network is an Internet.

112. The method of claim 39, wherein a merchant computer is interconnected with the buyer computer and shopping cart computer by the computer network;

wherein the merchant computer is programmed to fetch an advertising document from an advertising document database.

113. The method of claim 112, wherein the merchant computer is programmed to send one or more advertising documents to the buyer computer.

114. The method of claim 113, wherein the merchant computer is programmed to provide a product requested by the user.

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115. The method of claim 114, wherein the merchant computer is programmed to respond to payment orders from the buyer computer without the merchant computer having to communicate directly with the shopping cart computer to ensure that the user is authorized to purchase the product;

wherein the merchant computer is programmed to respond to payment orders from the buyer computer without the merchant computer having to store information in a database regarding which buyers are authorized to purchase which products.

116. The method of claim 113, wherein the advertisement documents are in the form of summaries of newspaper or newsletter articles;

wherein prior to a user's product request, the merchant computer sends an advertising document to the buyer computer;

117. The method of claim 39, wherein the buyer computer transmits an initial link that comprises information from which the shopping cart computer can create a session link message;

wherein the session link is transmitted from the shopping cart computer to the buyer computer;

wherein the session link message includes a session link authenticator for use by a computer to authenticate the session link message.

118. The method of claim 117, wherein the session link authenticator is a cryptographic function of the session link contents.

119. The method of claim 118, wherein the buyer computer is programmed to cause the session link message to be sent to a computer in the network which is programmed to authenticate the session link message by examining the session link authenticator and which is programmed to respond to the session link message based on state of the interaction between the buyer computer and the shopping cart computer.

120. The method of claim 39, wherein at least one of the requests comprises a shopping cart URL.

121. The method of claim 120, wherein the shopping cart URL comprises a domain identifier.

122. The method of claim 120, wherein the shopping cart URL comprises a merchant identifier.

123. The method of claim 120, wherein the shopping cart URL comprises a merchant account identifier.

124. The method of claim 120, wherein the shopping cart URL comprises a payment amount.

125. The method of claim 120, wherein the shopping cart URL comprises a product identifier.

126. The method of claim 120, wherein the shopping cart URL comprises a duration time.

127. The method of claim 120, wherein the shopping cart URL comprises an expiration time.

128. The method of claim 127, wherein the shopping cart computer transmits a document to the buyer computer indicating that the expiration time has passed.

129. The method of claim 120, wherein the URL comprises a buyer network address.

130. The method of claim 129, wherein the buyer computer network address is verified by matching it with a network address specified in the shopping cart URL.

131. The method of claim 130, wherein if the computer network address verification fails, then the shopping cart computer sends a document to the buyer computer indicating that access is not allowed.

132. The method of claim 120, wherein the shopping cart URL comprises an authenticator based on a cryptographic key;

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wherein the authenticator is a function of contents of the shopping cart URL.

151. The method of claim 150, wherein the payment computer verifies whether the payment URL authenticator was created from the shopping cart URL authenticator or a cryptographic key; if the verification fails, the payment computer transmits a document to the buyer computer indicating that access is denied.

152. The method of claim 148, wherein the payment URL authenticator comprises an expiration time.

153. The method of claim 152, wherein the payment computer transmits a document to the buyer computer indicating that the expiration time has passed.

154. The method of claim 148, wherein the payment URL authenticator comprises a buyer network address.

155. The method of claim 154, wherein the buyer computer network address is verified by matching it with the network address specified in the payment URL.

156. The method of claim 148, wherein the payment computer transmits a payment confirmation document to the buyer computer.

157. The method of claim 156, wherein the buyer computer prompts the user for the account name and password by creating an account name prompt and a password prompt.

158. The method of claim 157, wherein the payment computer verifies that the account name and password entered by the user match a previously provided account name and password.

159. The method of claim 158, wherein if the verification fails, then the payment computer sends a document to the buyer computer indicating that access is not allowed.

160. The method of claim 158, wherein if a payment amount exceeds a threshold, then the user is prompted for security information.

161. The method of claim 158, wherein the security information matches a previously transmitted account name and password; if the verification fails, then the payment computer sends a document to the buyer computer indicating that access is not allowed.

162. The method of claim 161, wherein the purchase of a product in a certain domain by a user account entitles access to other products in the domain for free or at a reduced price.

163. The method of claim 158, wherein the payment computer verifies whether the user account has sufficient funds or credit that satisfies a payment amount specified in the payment message.

164. The method of claim 148, wherein the payment computer transmits a document to the buyer computer indicating that the verification fails, then the payment computer sends a document to the buyer computer indicating that access is not allowed.

165. The method of claim 158, wherein a self-payment access is not allowed.

166. The method of claim 158, wherein the user has unexpired access to a domain identified in the payment message; wherein the user is presented with an option to repurchase a product in a certain domain by a user account entitles access to other products in the domain for free or at a reduced price.

167. The method of claim 145, wherein the buyer computer transmits a purchase product message to the merchant computer, and in response, the merchant computer provides a payment URL to the buyer computer.

168. The method of claim 147, wherein the buyer computer transmits the payment URL to a payment computer.

169. The method of claim 148, wherein the payment computer is the shopping cart computer.

170. The method of claim 148, wherein the payment computer is a function of contents of the payment URL.

171. The method of claim 145, wherein the merchant computer updates the remote advertising document database on the merchant computer.

172. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

173. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

174. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

175. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

176. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

177. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

178. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

179. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

180. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

181. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

182. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

183. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

184. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

185. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

186. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

187. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

188. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

189. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

190. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

191. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

192. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

193. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

194. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

195. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

196. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

197. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

198. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

199. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

200. The method of claim 145, wherein the merchant computer updates the advertising document database on the merchant computer.

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164. The method of claim 158, wherein the payment computer records an end of duration time in a settlement database.

165. The method of claim 158, wherein the payment computer creates an access URL including an access URL authenticator that is a digital signature generated based on a cryptographic key;

wherein the access URL authenticator is a hash of other information in the access URL;

wherein the payment computer sends a redirect to the access URL to the buyer computer;

wherein the buyer computer sends the access URL to a merchant computer.

166. The method of claim 165, wherein the merchant computer verifies whether the access URL authenticator was created from said other information in the access URL using the cryptographic key;

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if the verification fails, then the merchant computer sends a document to the buyer computer indicating that access is not allowed.

167. The method of claim 165, wherein the merchant computer verifies whether a duration time for access has expired;

if the verification fails, then the merchant computer sends a document to the buyer computer indicating that the duration time has expired.

168. The method of claim 165, wherein the merchant computer verifies that a buyer computer network address is the same as a buyer network address contained in the access URL;

if the verification fails, then the merchant computer sends a document to the buyer computer indicating that access is not allowed.

* * * * *

EXHIBIT C



US005909492A

United States Patent [19]

Payne et al.

[11] Patent Number: **5,909,492**[45] Date of Patent: **Jun. 1, 1999**[54] **NETWORK SALES SYSTEM**

[75] Inventors: **Andrew C. Payne, Lincoln; Lawrence C. Stewart, Burlington, both of Mass.; David J. Mackie, Brookdale, Calif.**

[73] Assignee: **Open Market, Incorporated, Cambridge, Mass.**

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Primary Examiner—Bernarr E. Gregory
 Attorney, Agent, or Firm—Fish & Richardson P.C.

ABSTRACT

[57] A network-based sales system includes at least one buyer computer for operation by a user desiring to buy a product, at least one merchant computer, and at least one payment computer. The buyer computer, the merchant computer, and the payment computer are interconnected by a computer network. The buyer computer is programmed to receive a user request for purchasing a product, and to cause a payment message to be sent to the payment computer that comprises a product identifier identifying the product. The payment computer is programmed to receive the payment message, to cause an access message to be created that comprises the product identifier and an access message authenticator based on a cryptographic key, and to cause the access message to be sent to the merchant computer. The merchant computer is programmed to receive the access message, to verify the access message authenticator to ensure that the access message authenticator was created using the cryptographic key, and to cause the product to be sent to the user desiring to buy the product.

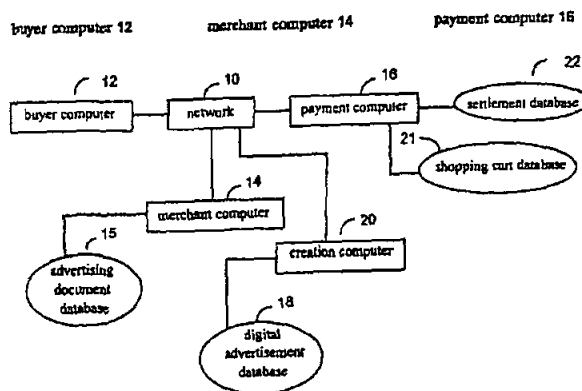
38 Claims, 25 Drawing Sheets**Related U.S. Application Data**

[63] Continuation of application No. 08/328,133, Oct. 24, 1994, Pat. No. 5,715,314.

[51] Int. Cl.⁶ **H04L 9/00**
 [52] U.S. Cl. **380/24; 380/23; 380/25; 380/49; 380/50; 705/26; 705/27; 705/39; 705/40; 705/44**
 [58] Field of Search **380/4, 9, 21, 23, 380/24, 25, 49, 50; 235/379, 380; 705/26, 27, 39, 40, 41, 42, 43, 44, 14, 16**

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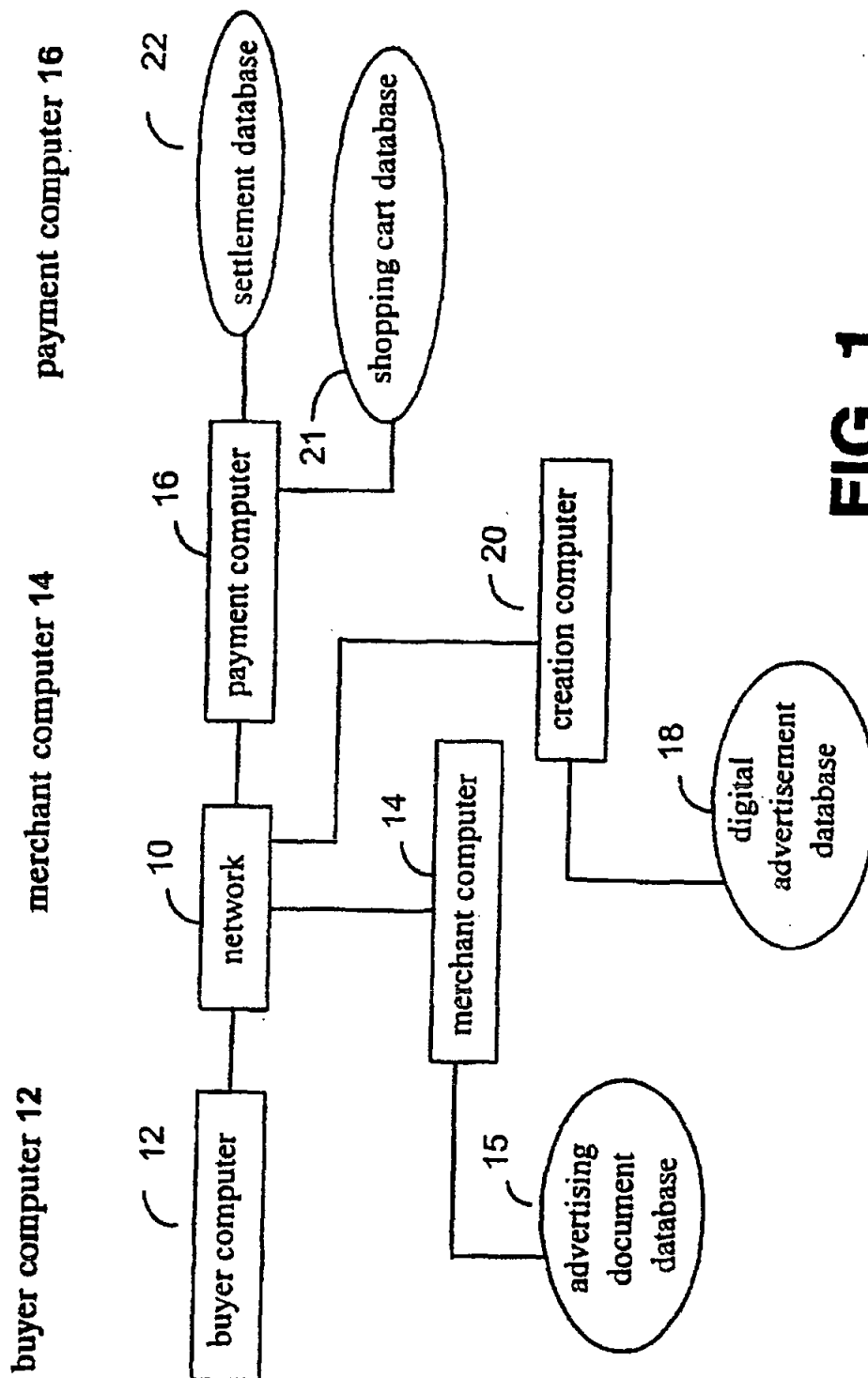


FIG. 1

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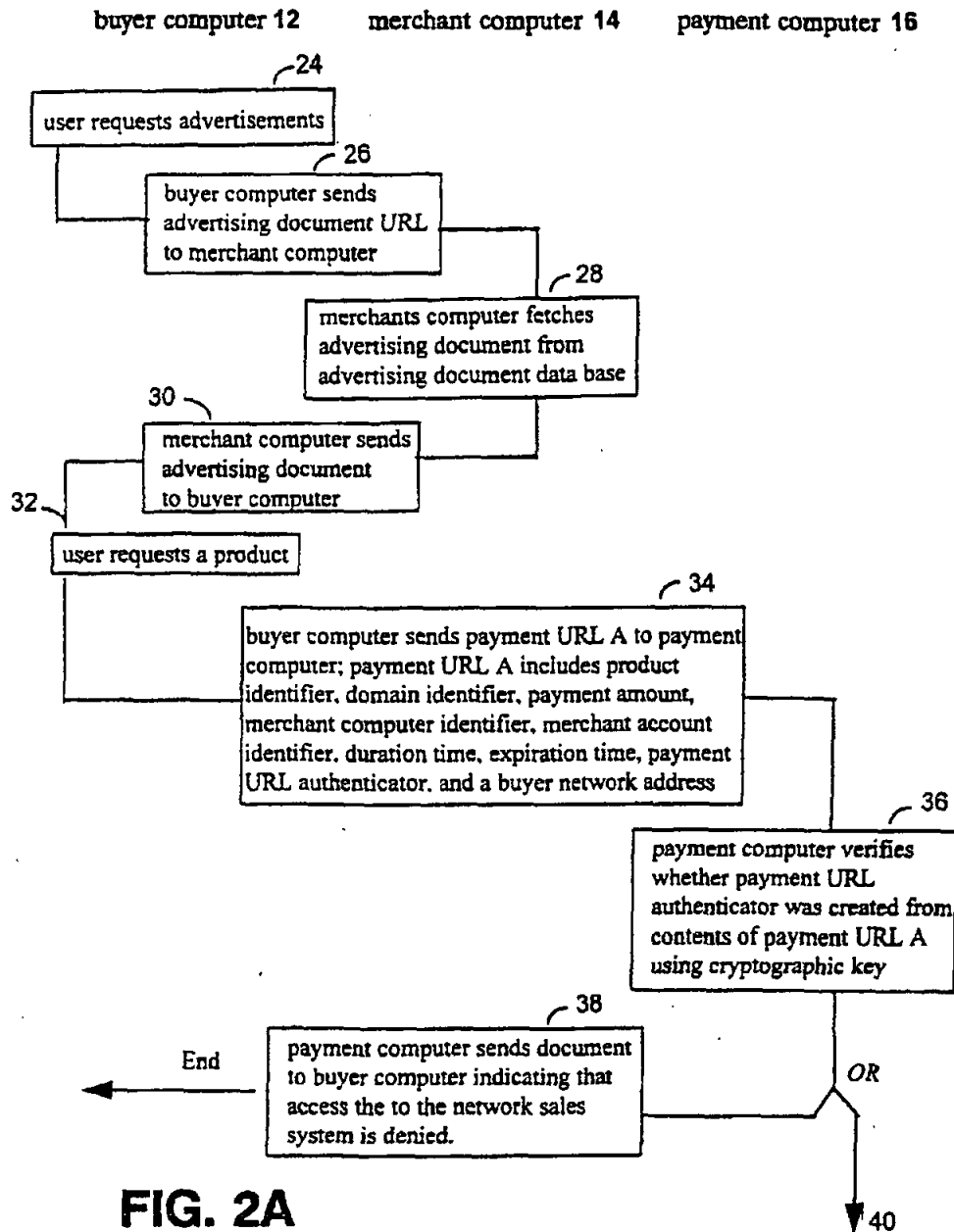


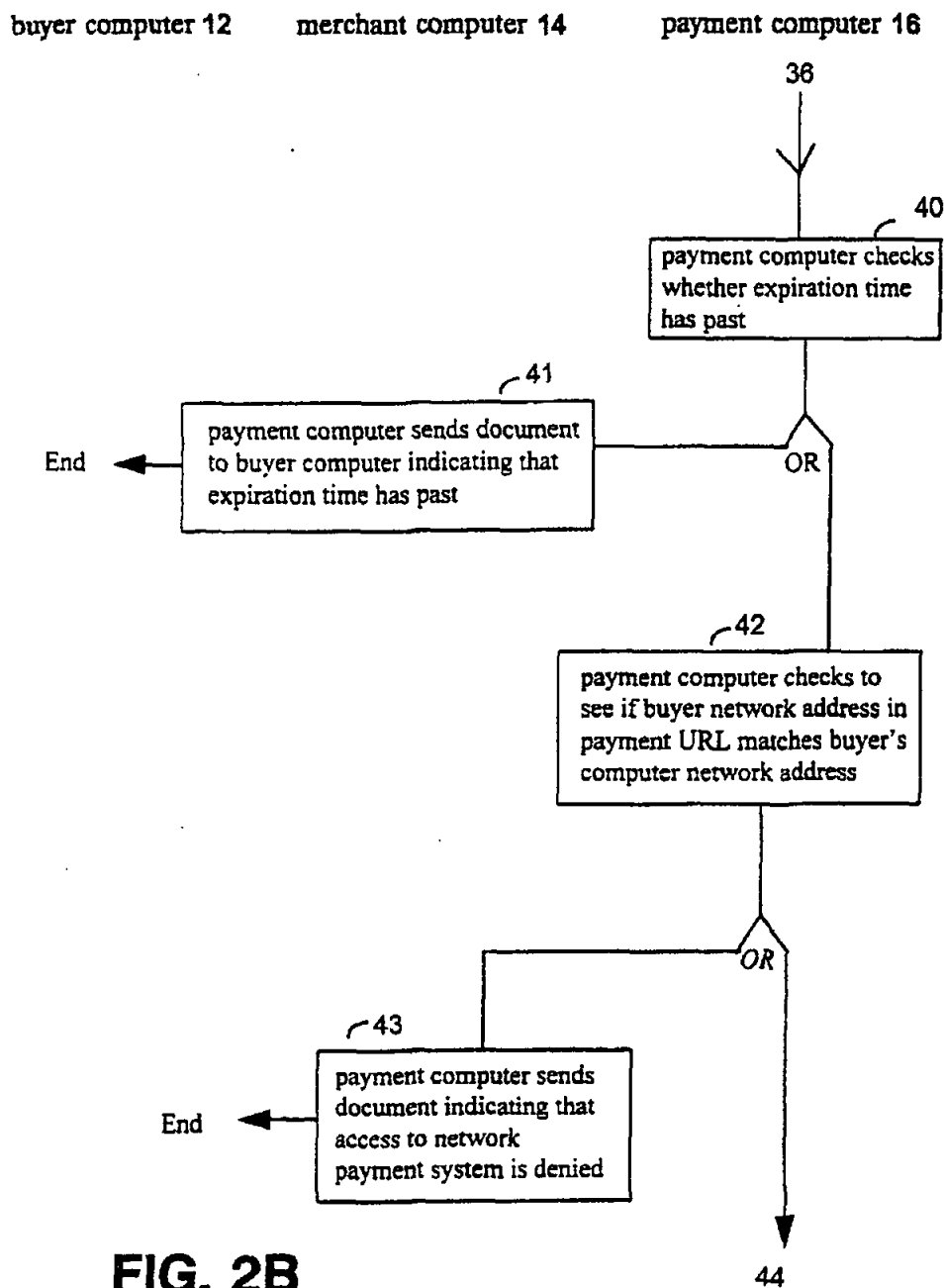
FIG. 2A

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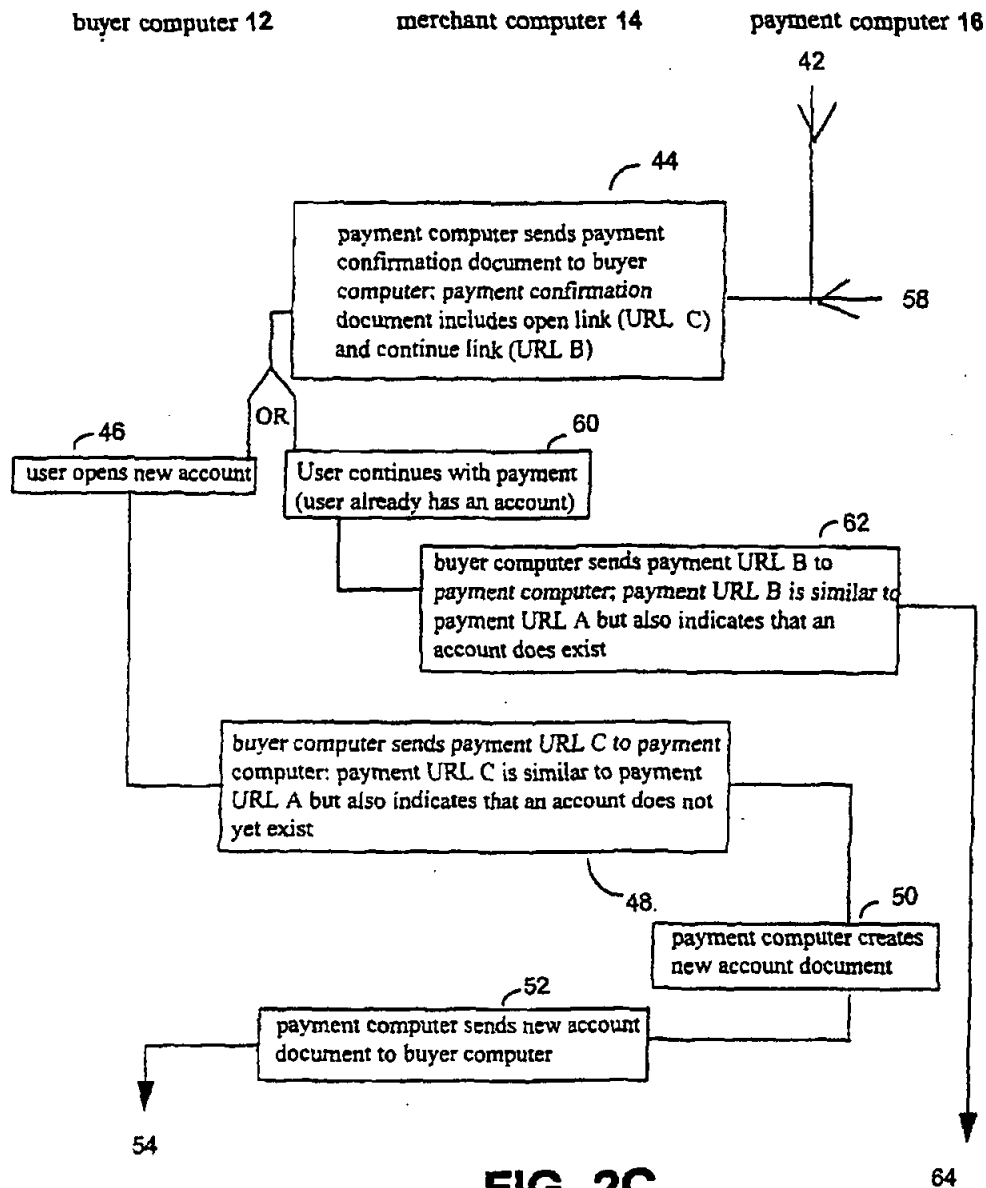


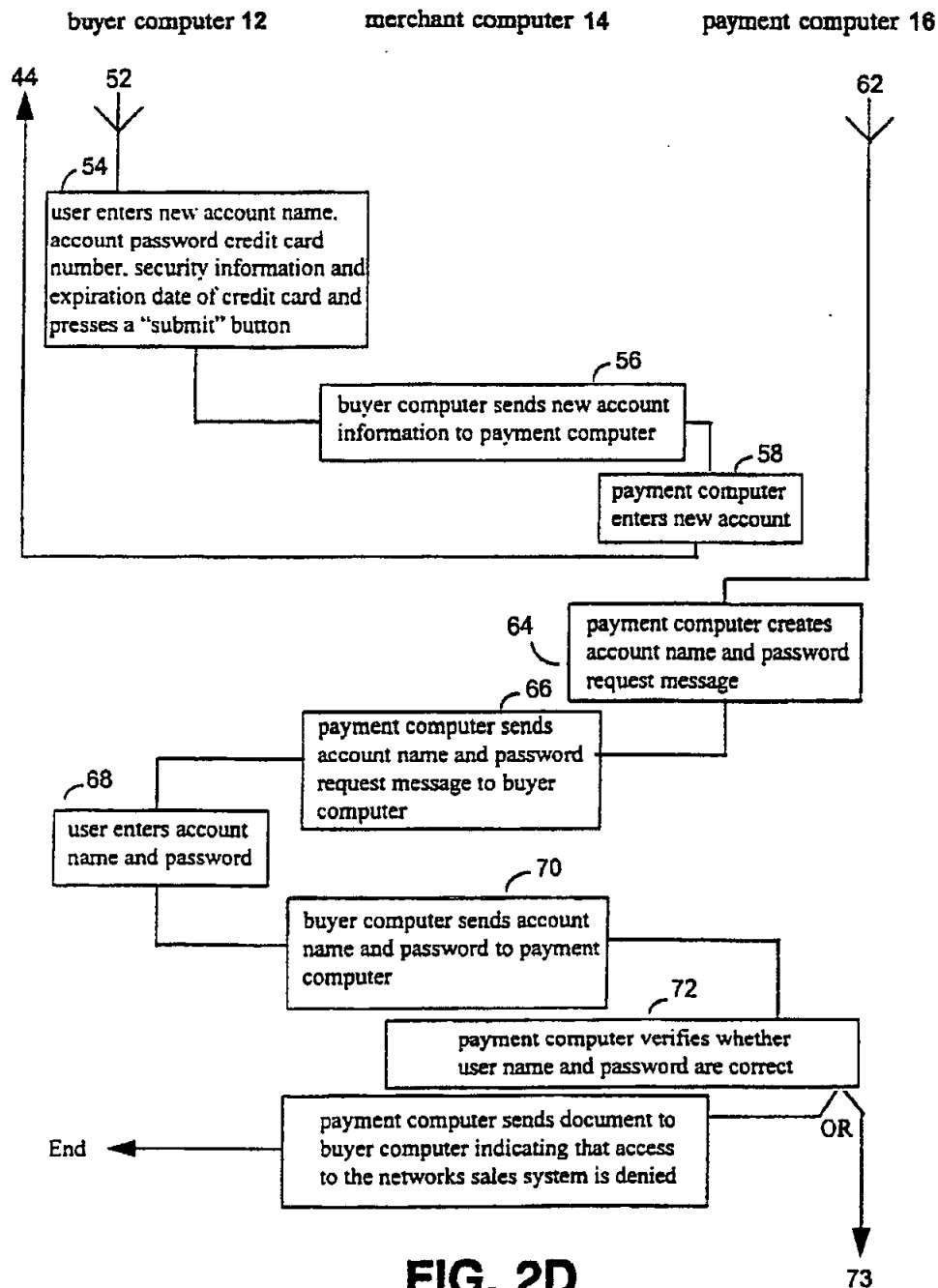
FIG. 2C

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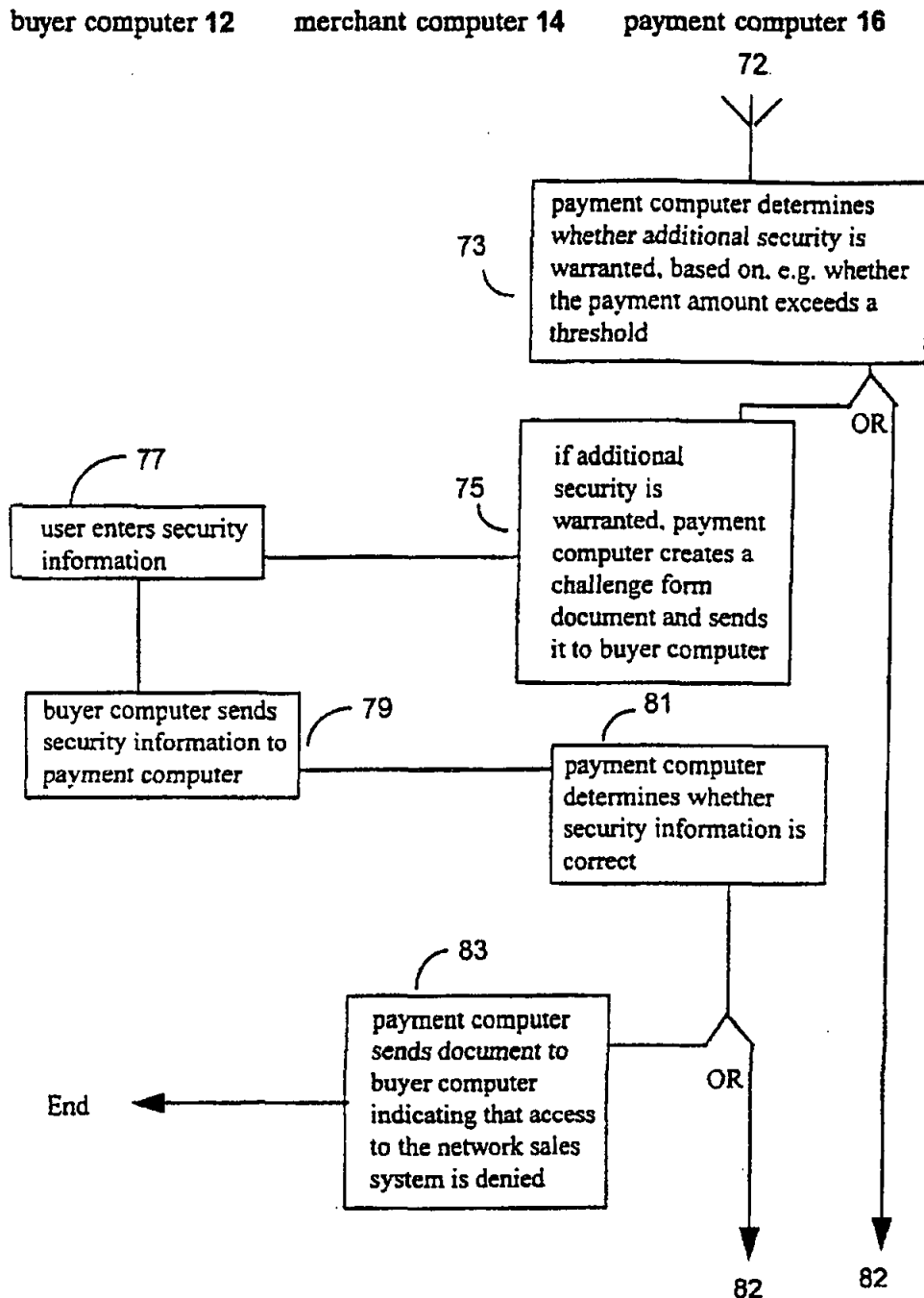


FIG. 2E

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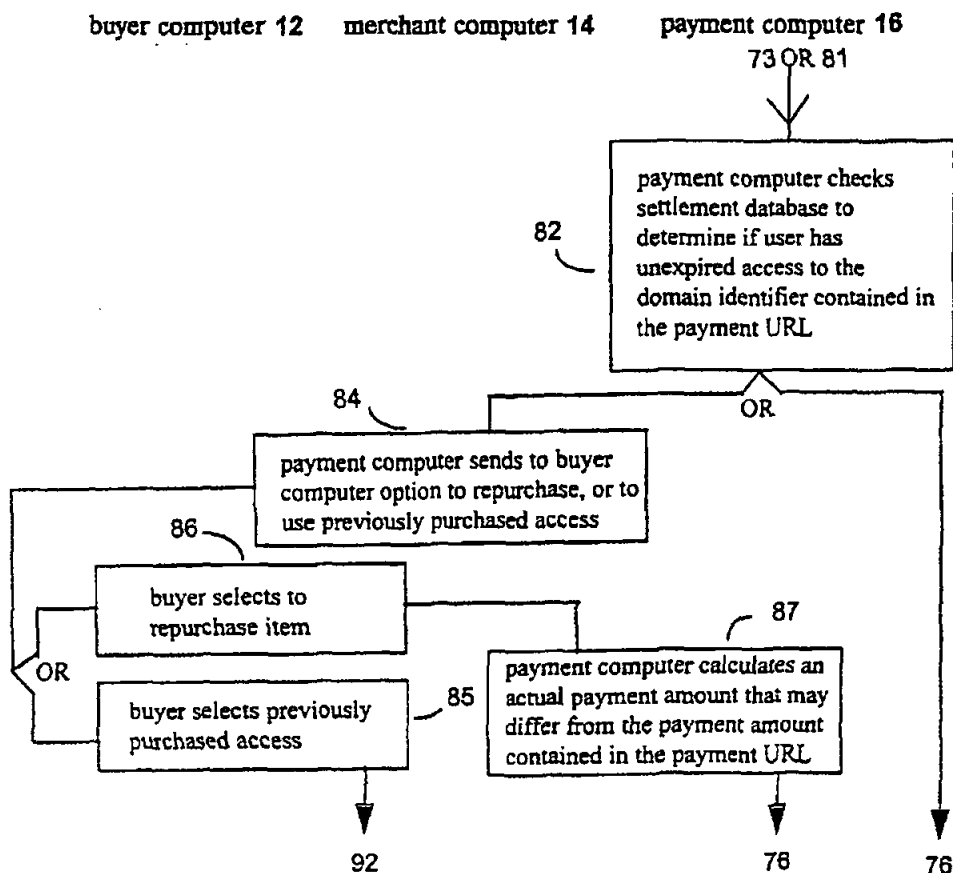


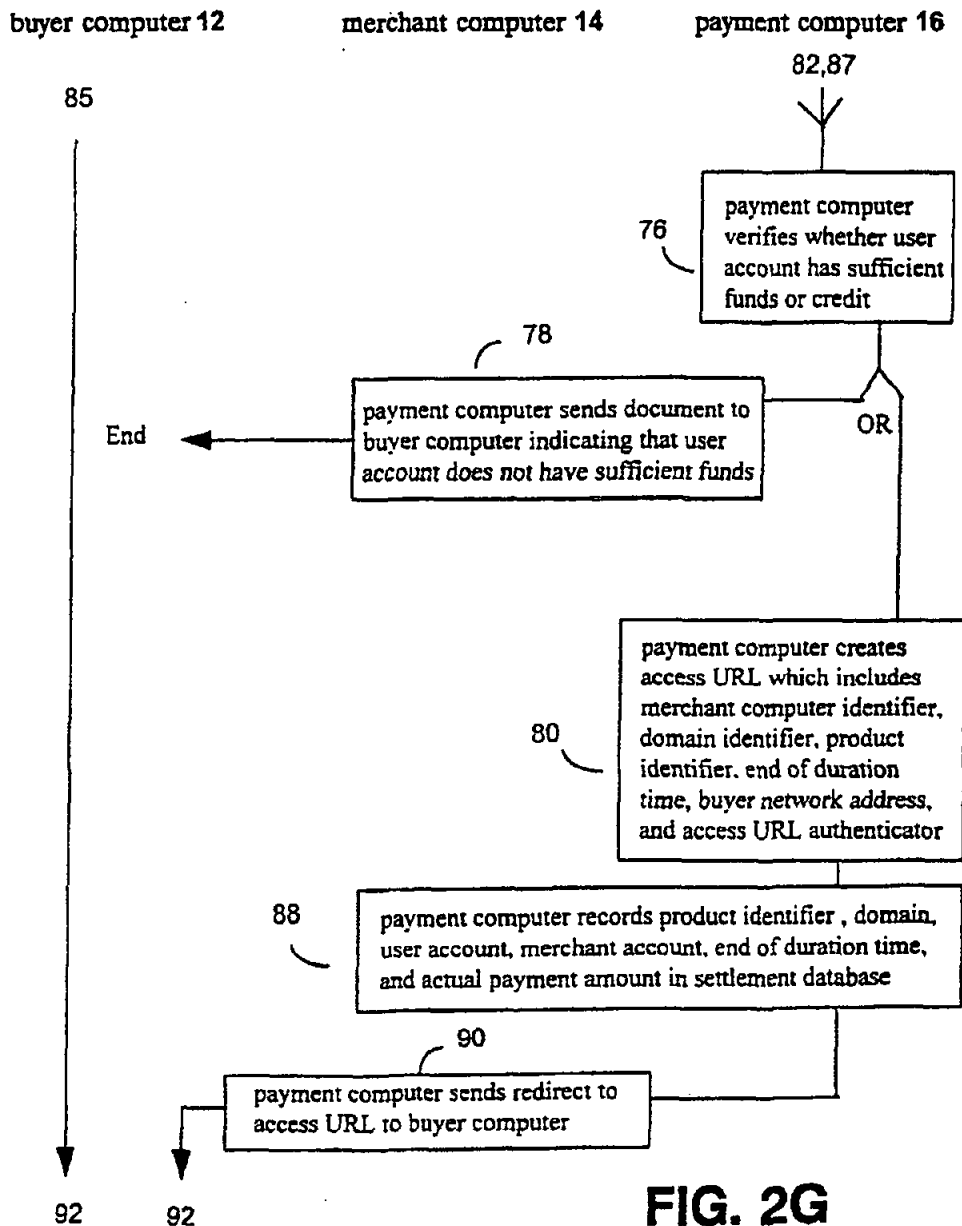
FIG. 2F

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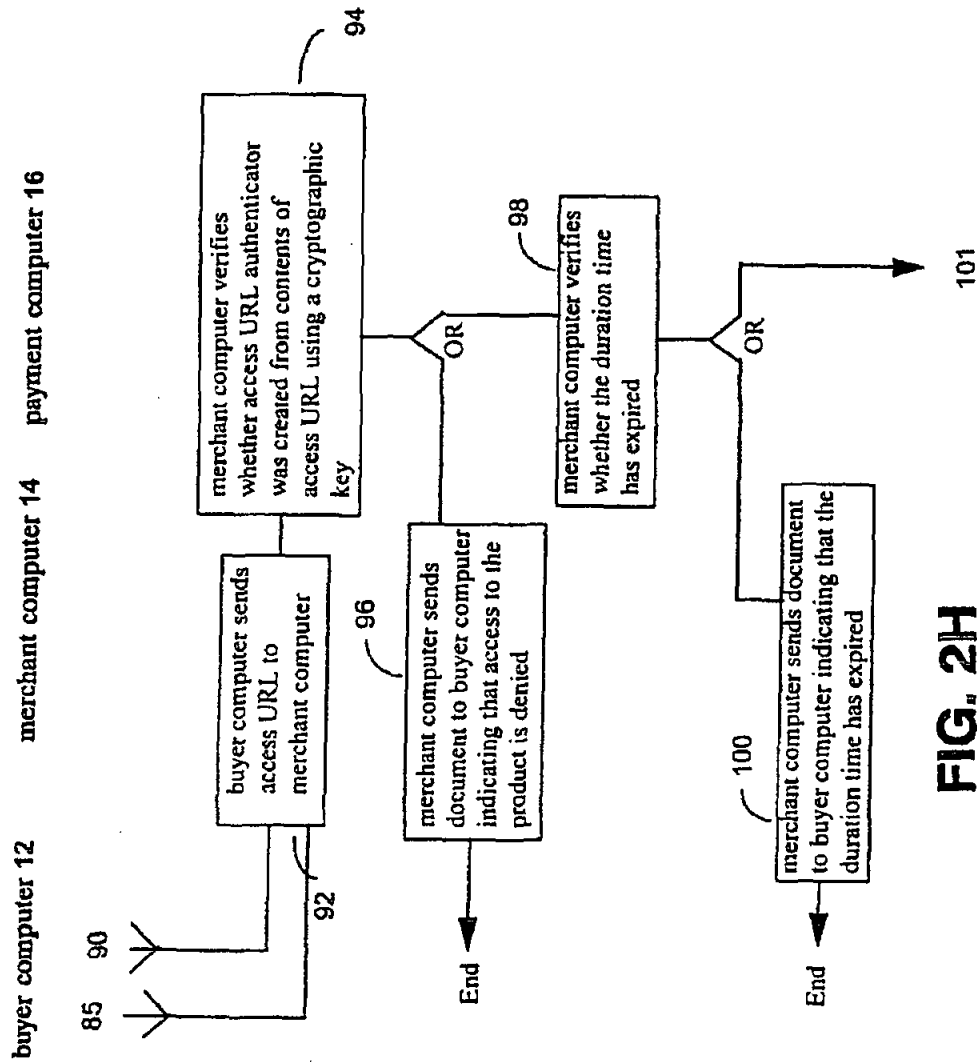


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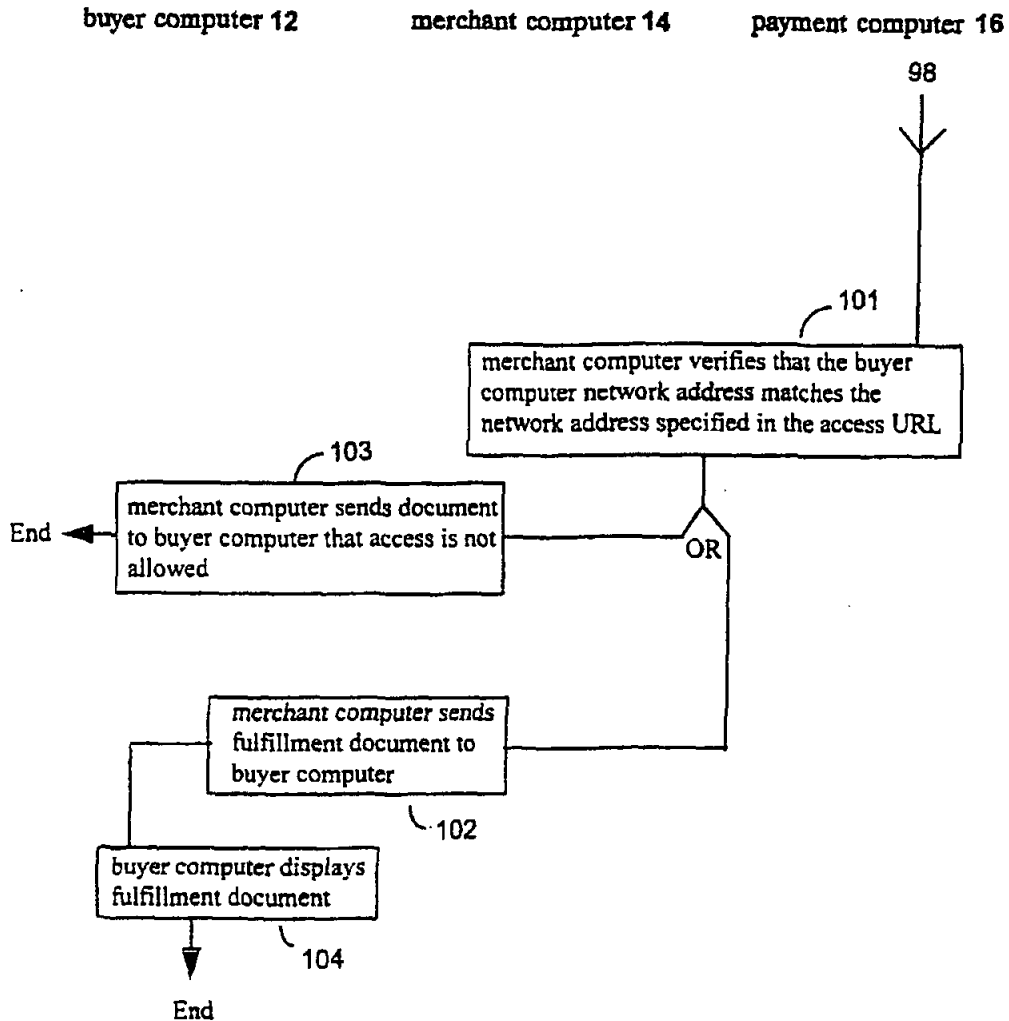


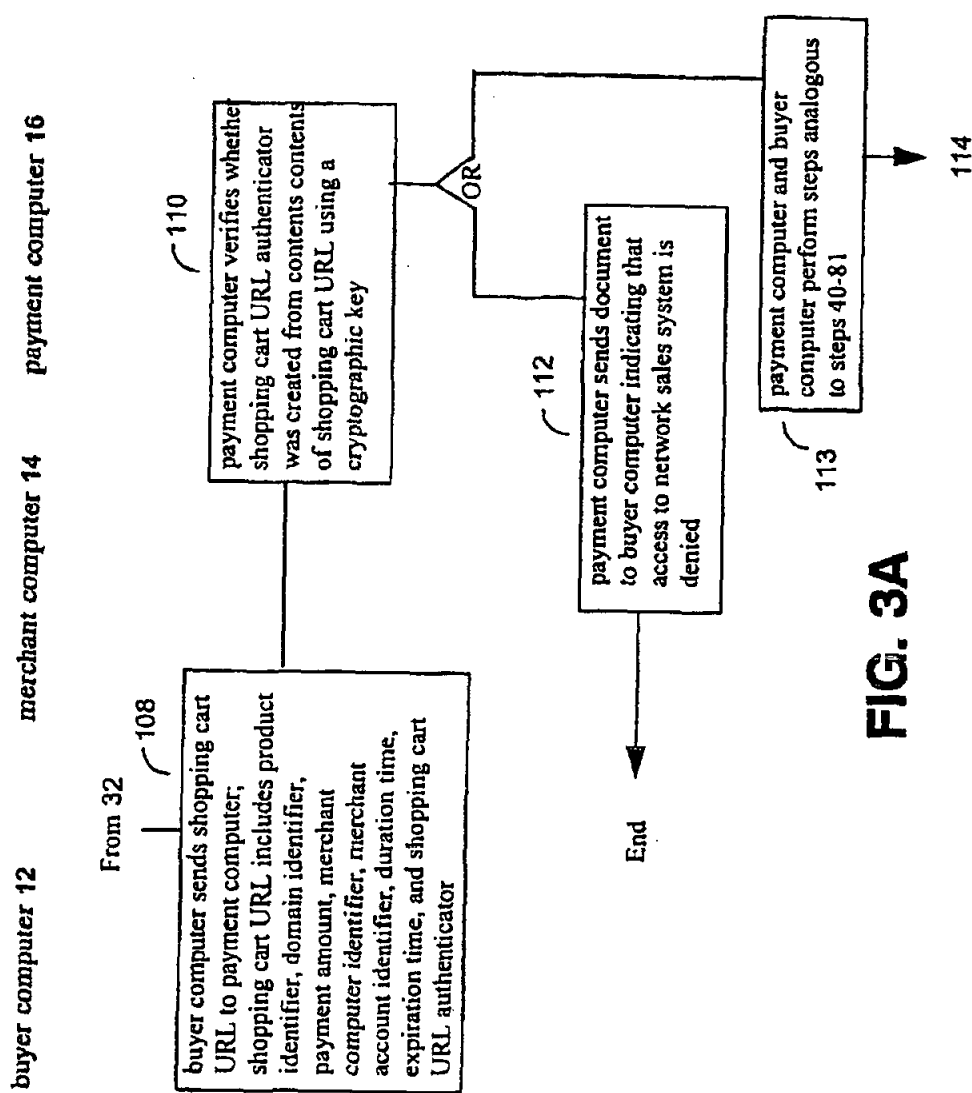
FIG. 2I

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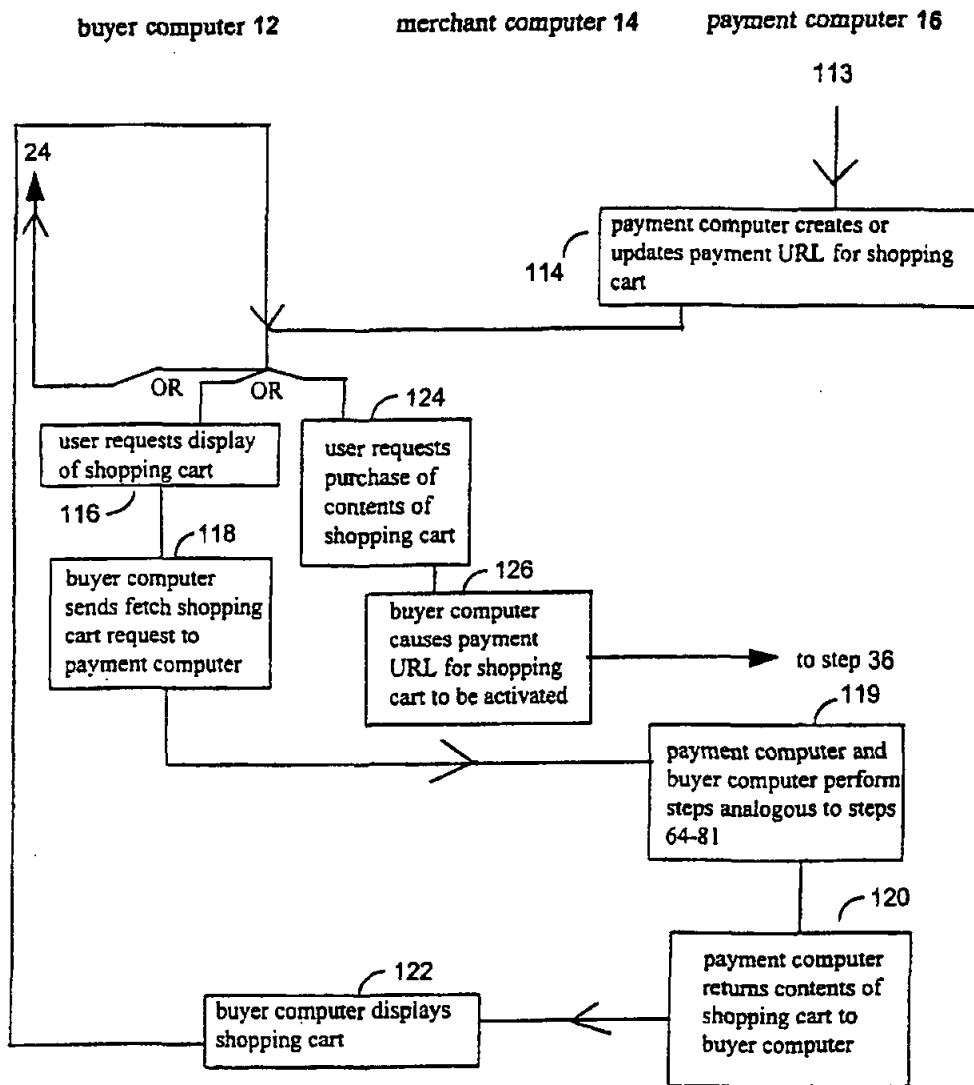


FIG. 3B

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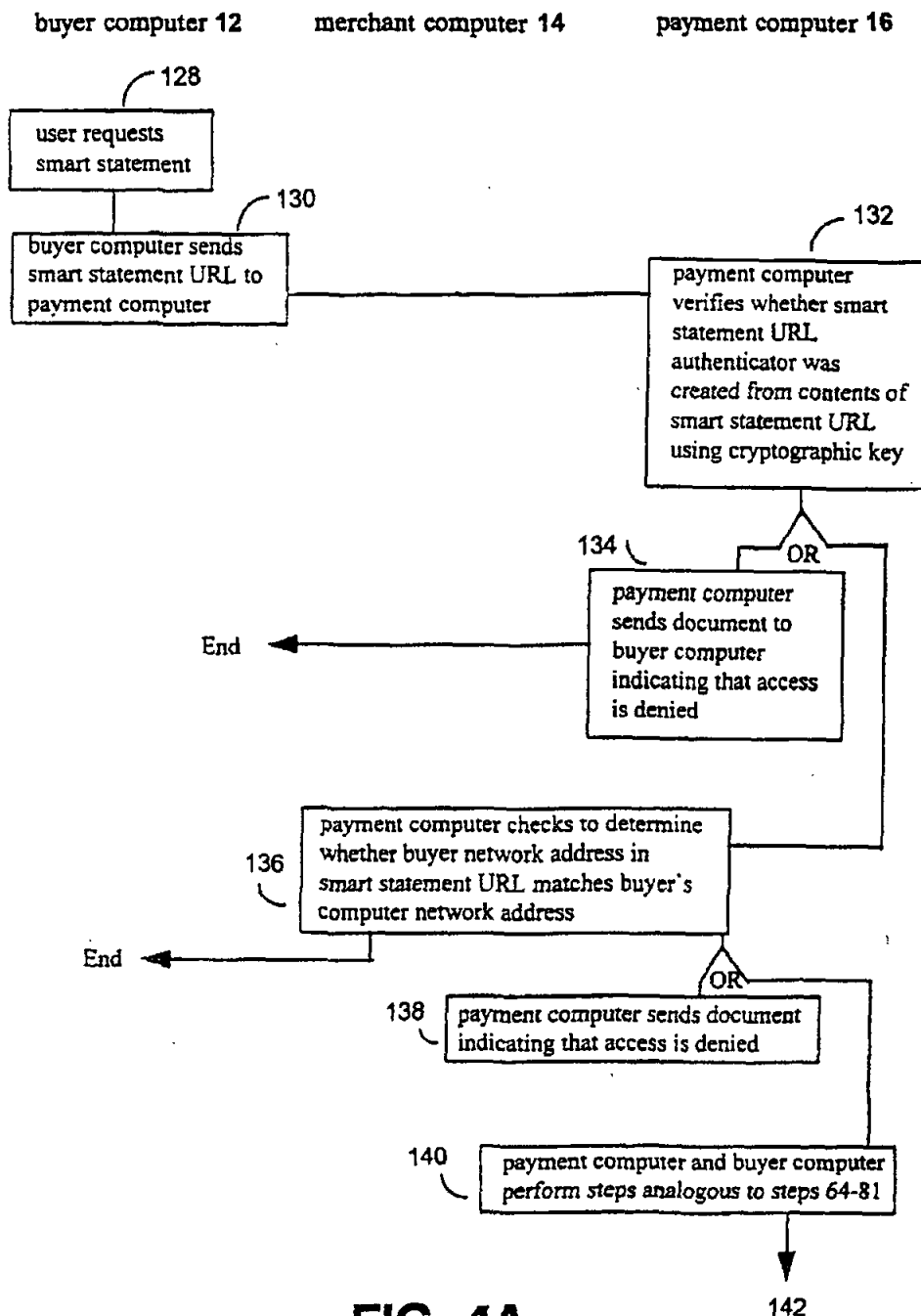


FIG. 4A

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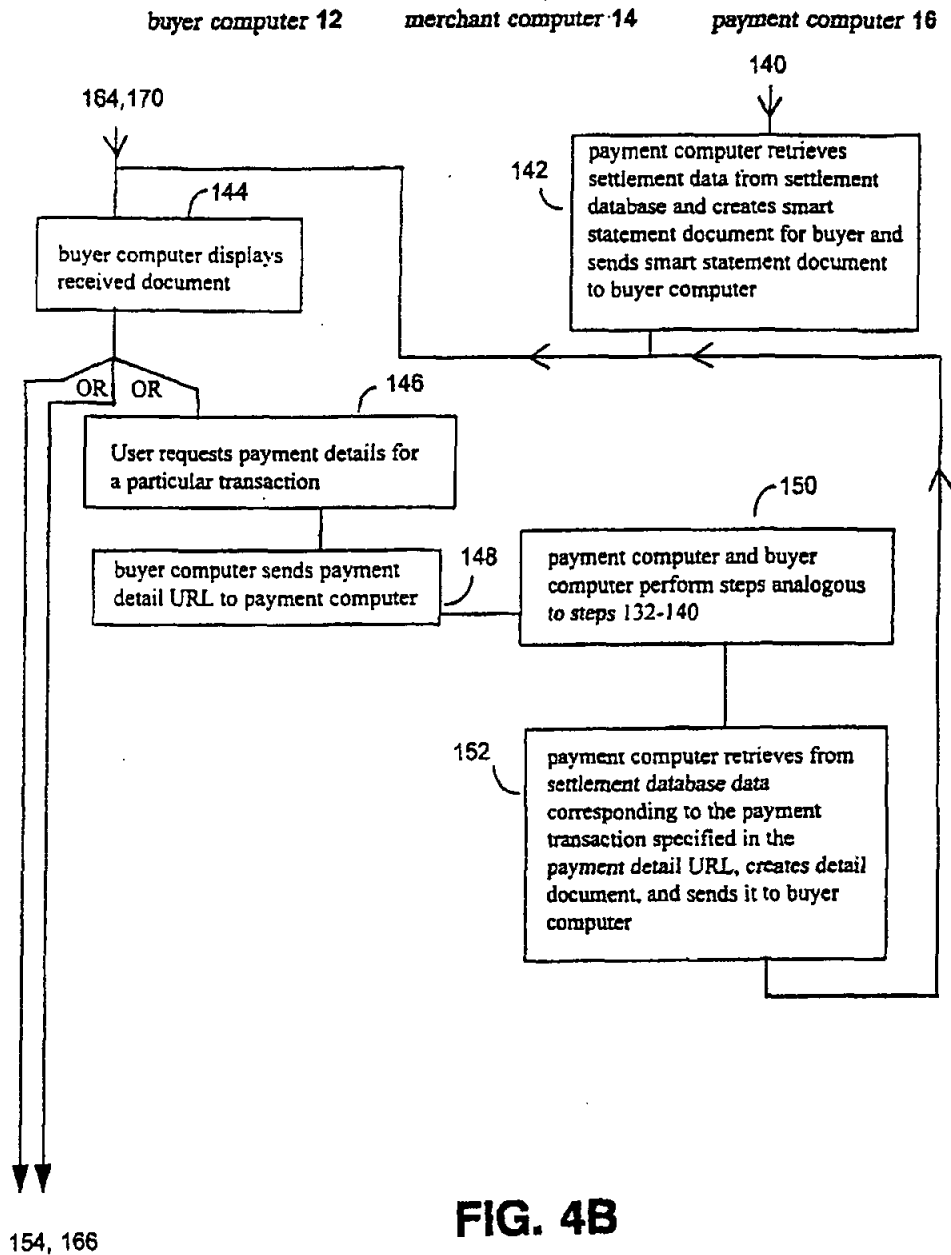


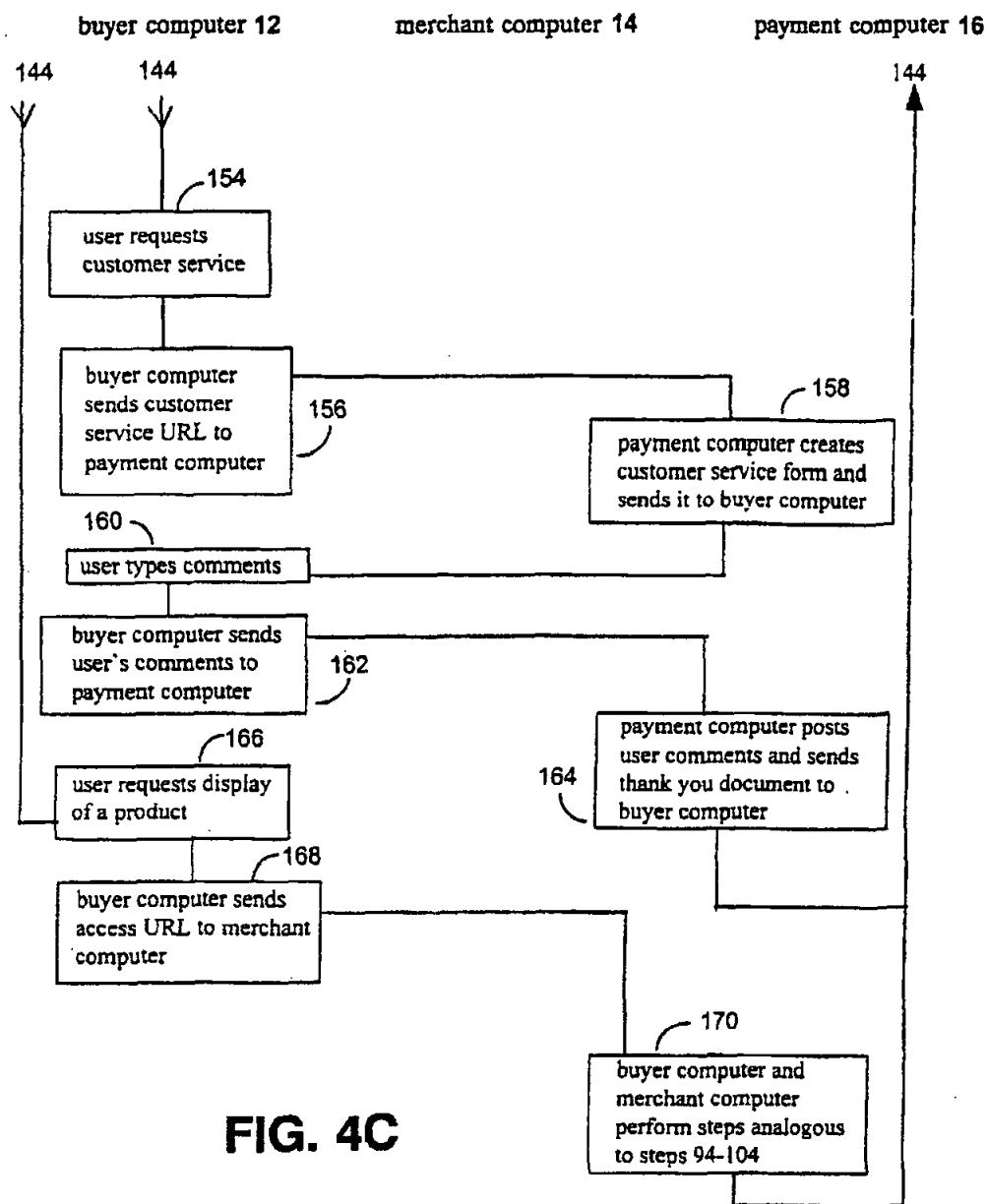
FIG. 4B

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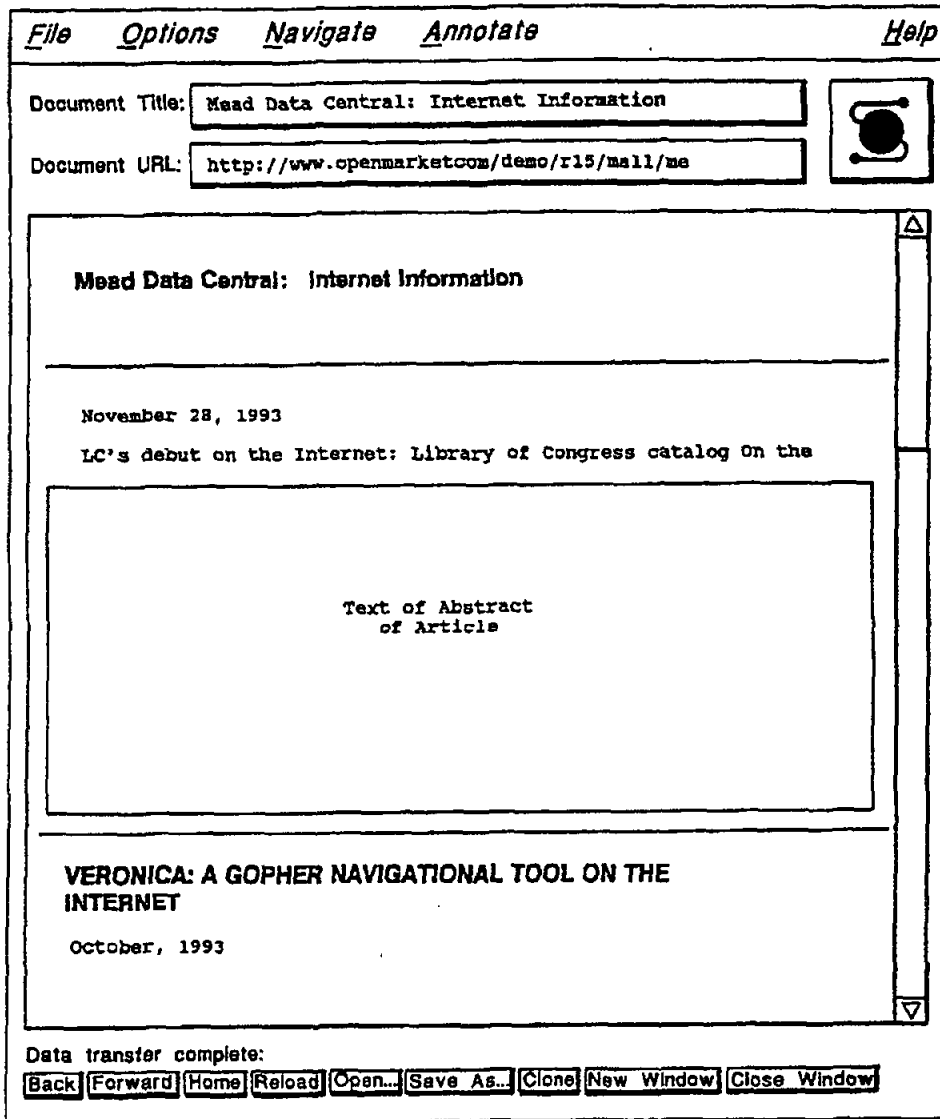


FIG. 5

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The screenshot shows a web browser window with a menu bar containing File, Options, Navigate, Annotate, and Help. Below the menu bar, there are two input fields: "Document Title:" with the text "Open Market Payment" and "Document URL:" with the text "http://payment.openmarket.com/ben/nph-payment". To the right of these fields is a small icon of a document with a magnifying glass. The main content area of the browser displays the following text:

Open Market Payment

You have selected an item that requires payment

Merchant: Test Merchant
Description: Mead Data Central Article
Amount: 2.85 (US currency)

If you have an Open Market account click on "continue" below and you will be prompted for your account name and password. If you do not have an account, you can establish one on-line and return to this page to continue your purchase.

an account on-line

with payment transaction.

NOTE: For demonstrations use the account name testuser@openmarket.com with the password testuser.

Open Market, Inc.

At the bottom of the browser window, a status bar displays "Data transfer complete:" followed by a row of buttons: Back, Forward, Home, Reload, Open..., Save As..., Clone, New Window, and Close Window.

FIG. 6

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<u>File</u>	<u>Options</u>	<u>Navigate</u>	<u>Annotate</u>	<u>Help</u>
-------------	----------------	-----------------	-----------------	-------------

Document Title:

Document URL:

Card Number:

Expiration Date: (format MM/YY)

Check the appropriate boxes:

☐ I am the owner of the above credit card.

☐ The above address is also the billing address for this credit card.

Your OpenMarket account statement is available on-line. At your option you may a copy of your statement automatically sent to your e-mail address at weekly or monthly intervals. Please choose a statement option.

☐ Weekly statements ☐ Monthly statements ☐ No e-mail statements

Account name and password

Please choose an account name and password for your OpenMarket account. We suggest using an account name that is unique and easy to remember such as your e-mail address. Your password should be 8 characters or longer.

Account Name

Password

Data transfer complete:

FIG. 7

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Document is protected.
Enter username for Open Market Account at payment.openmarket.com:

OK **Cancel**

FIG. 8

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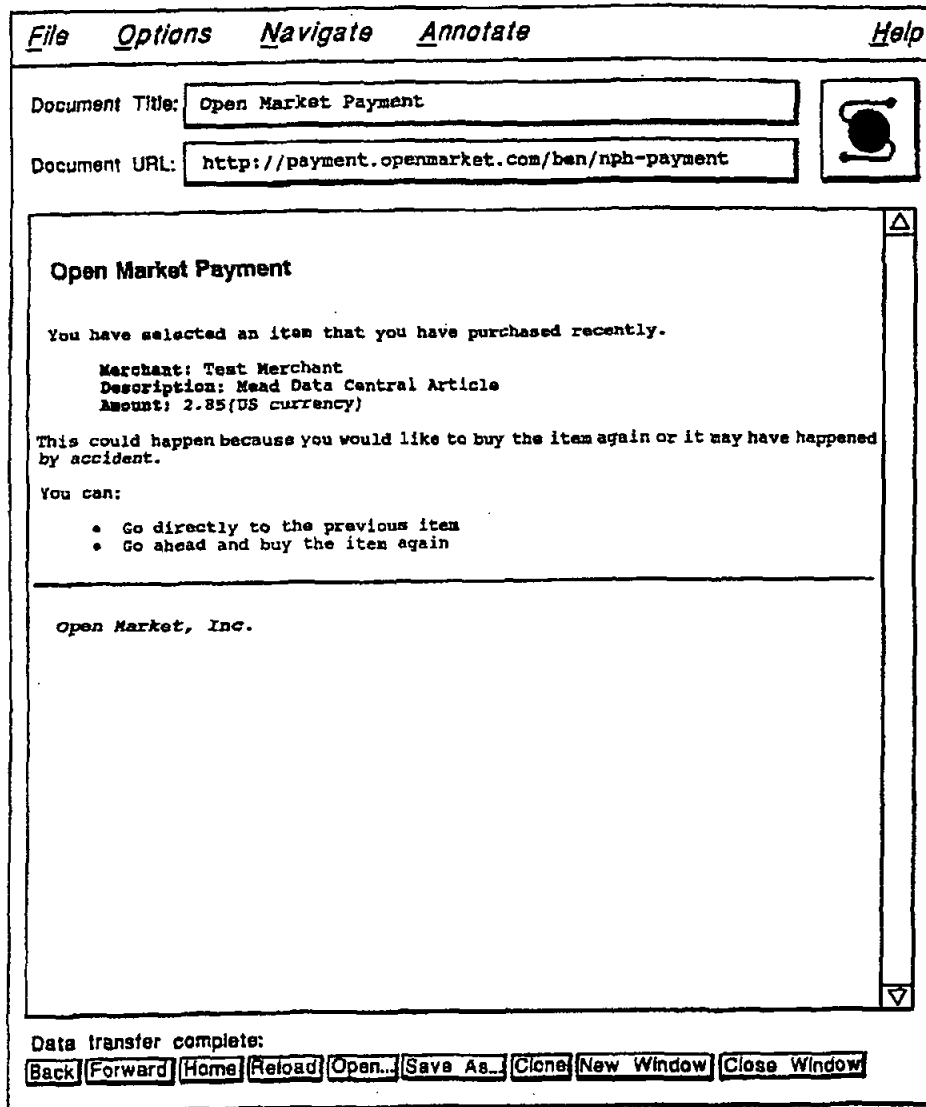


FIG. 9

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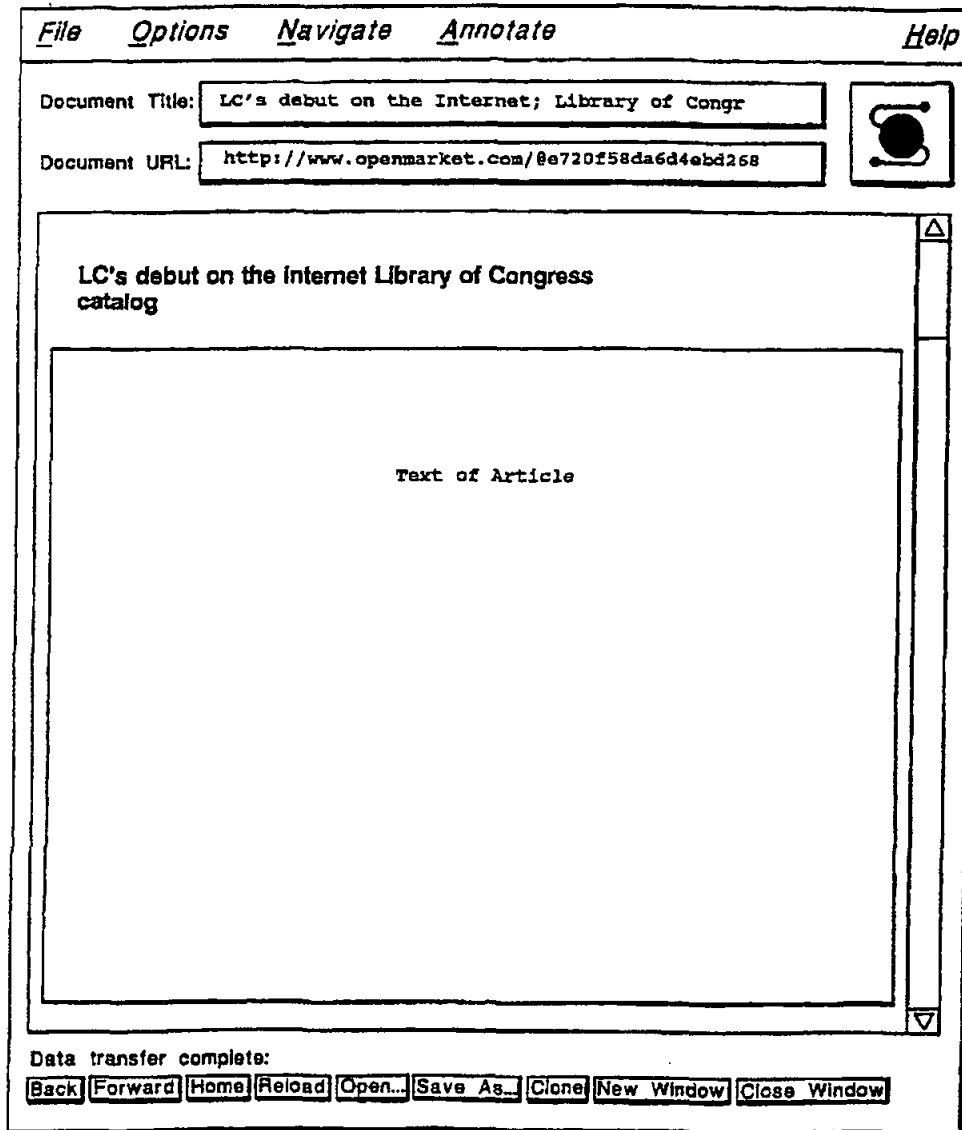


FIG. 10

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<u>File</u>	<u>Options</u>	<u>Navigate</u>	<u>Annotate</u>	<u>Help</u>																																																																	
Document Title: <input type="text" value="Smart Statement for Test User"/>																																																																					
Document URL: <input type="text" value="http://payment.openmarket.com/in/nph-statement"/>																																																																					
<p>Information about the item.</p> <p>Transactions in October 1994</p> <table border="0"> <tbody> <tr> <td>Mon Oct 3</td> <td>Test Merchant</td> <td>Dilbert subscription</td> <td>20 seconds</td> <td>amount \$0.10</td> </tr> <tr> <td>Tue Oct 4</td> <td>Test Merchant</td> <td>Mead Data</td> <td>Central Article</td> <td>amount \$2.95</td> </tr> <tr> <td>Tue Oct 4</td> <td>Test Merchant</td> <td>Mead Data</td> <td>Central Article</td> <td>amount \$2.95</td> </tr> <tr> <td>Tue Oct 4</td> <td>Test Merchant</td> <td>Mead Data</td> <td>Central Article</td> <td>amount \$2.95</td> </tr> <tr> <td>Tue Oct 4</td> <td>Test Merchant</td> <td>N.Y. Times</td> <td>Article</td> <td>amount \$0.50</td> </tr> <tr> <td>Tue Oct 4</td> <td>Test Merchant</td> <td>Mead Data</td> <td>Central Article</td> <td>amount \$2.95</td> </tr> <tr> <td>Wed Oct 5</td> <td>Test Merchant</td> <td>Mead Data</td> <td>Central Article</td> <td>amount \$2.95</td> </tr> <tr> <td>Wed Oct 5</td> <td>Test Merchant</td> <td>Mead Data</td> <td>Central Article</td> <td>amount \$2.95</td> </tr> <tr> <td>Wed Oct 5</td> <td>Test Merchant</td> <td>Mead Data</td> <td>Central Article</td> <td>amount \$2.95</td> </tr> <tr> <td>Wed Oct 5</td> <td>Test Merchant</td> <td>Mead Data</td> <td>Central Article</td> <td>amount \$2.95</td> </tr> <tr> <td>Wed Oct 5</td> <td>Test Merchant</td> <td>Mead Data</td> <td>Central Article</td> <td>amount \$2.95</td> </tr> <tr> <td>Wed Oct 5</td> <td>Test Merchant</td> <td>Mead Data</td> <td>Central Article</td> <td>amount \$2.95</td> </tr> <tr> <td>Wed Oct 5</td> <td>Test Merchant</td> <td>Mead Data</td> <td>Central Article</td> <td>amount \$2.95</td> </tr> </tbody> </table> <p>Your total is 33.05.</p> <p>Previous Statements</p> <ul style="list-style-type: none"> • September 1994 • August 1994 <p>Return to your Newest Statement</p> <p>Feedback</p> <p>You can send us comments and suggestions here.</p>					Mon Oct 3	Test Merchant	Dilbert subscription	20 seconds	amount \$0.10	Tue Oct 4	Test Merchant	Mead Data	Central Article	amount \$2.95	Tue Oct 4	Test Merchant	Mead Data	Central Article	amount \$2.95	Tue Oct 4	Test Merchant	Mead Data	Central Article	amount \$2.95	Tue Oct 4	Test Merchant	N.Y. Times	Article	amount \$0.50	Tue Oct 4	Test Merchant	Mead Data	Central Article	amount \$2.95	Wed Oct 5	Test Merchant	Mead Data	Central Article	amount \$2.95	Wed Oct 5	Test Merchant	Mead Data	Central Article	amount \$2.95	Wed Oct 5	Test Merchant	Mead Data	Central Article	amount \$2.95	Wed Oct 5	Test Merchant	Mead Data	Central Article	amount \$2.95	Wed Oct 5	Test Merchant	Mead Data	Central Article	amount \$2.95	Wed Oct 5	Test Merchant	Mead Data	Central Article	amount \$2.95	Wed Oct 5	Test Merchant	Mead Data	Central Article	amount \$2.95
Mon Oct 3	Test Merchant	Dilbert subscription	20 seconds	amount \$0.10																																																																	
Tue Oct 4	Test Merchant	Mead Data	Central Article	amount \$2.95																																																																	
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Tue Oct 4	Test Merchant	N.Y. Times	Article	amount \$0.50																																																																	
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Wed Oct 5	Test Merchant	Mead Data	Central Article	amount \$2.95																																																																	
<p>Data transfer complete:</p> <p> <input type="button" value="Back"/> <input type="button" value="Forward"/> <input type="button" value="Home"/> <input type="button" value="Reload"/> <input type="button" value="Open..."/> <input type="button" value="Save As..."/> <input type="button" value="Clone"/> <input type="button" value="New Window"/> <input type="button" value="Close Window"/> </p>																																																																					

FIG. 11

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File Options Navigate Annotate Help

Document Title:

Document URL:

Smart Statement Detail

This is the detailed information about a particular transaction from your Smart Statement

Transaction Information

url: http://www.openmarket.com/demos/aug15/mail/mead-fingerprint/mkarticle.cgo
transaction_log_id: 50254.0
currency: US
transaction_date: 781377633
initiator: 1.0
expiration: 2592000
description: Mead Data Central Article
amount: 2.95
beneficiary: 3.0
ip_address: 199.170.183.13
transaction_type: p
domain: mead.internet-1

Merchant Information

telephone: 617-621-9501
address_1: Open Market, Inc.
address_2: 215 First Street
fax: 617-621-1703
address_3: Cambridge, MA
email: testmerchant@openmarket.com
principal_name: Test Merchant

Data transfer complete:

FIG. 12

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<u>F</u> ile	<u>O</u> ptions	<u>N</u> avigate	<u>A</u> nnotate	<u>H</u> elp
Document Title: <input type="text" value="Smart Statement Detail"/>				
Document URL: <input type="text" value="http://payment.openmarket.com/ec632f154cc8021"/>				
<div><p>url: http://www.openmarket.com/demos/aug15/mall/mead-fingerprint/mkarticle.cgo transaction_log_id: 50254.0 currency: US transaction_date: 781377633 initiator: 1.0 expiration: 2592000 description: Mead Data Central Article amount: 2.95 beneficiary: 3.0 ip_address: 199.170.183.13 transaction_type: p domain: mead.internat-1</p><p>Merchant Information</p><p>telephone: 617-621-9501 address_1: Open Market, Inc. address_2: 215 First Street fax: 617-621-1703 address_3: Cambridge, MA email: testmerchant@openmarket.com principal_name: Test Merchant home_url: country: US postal_code: 02142</p><p>Feedback</p><p>You can send us comments and suggestions here.</p></div>				
Data transfer complete: <input type="button" value="Back"/> <input type="button" value="Forward"/> <input type="button" value="Home"/> <input type="button" value="Reload"/> <input type="button" value="Open..."/> <input type="button" value="Save As..."/> <input type="button" value="Clone"/> <input type="button" value="New Window"/> <input type="button" value="Close Window"/>				

FIG. 13

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The screenshot shows a web browser window with a menu bar containing 'File', 'Options', 'Navigate', 'Annotate', and 'Help'. The 'Document Title' is 'Open Market Feedback' and the 'Document URL' is 'http://payment.openmarket.com/ben/feedback.cg'. A small icon of a person is visible next to the URL. The main content area contains the following text: 'Or if you prefer, you can send your comments via electronic mail to feedback@openmarket.com or via FAX to +1.617.621.1703. If you would like a reply please include your e-mail address.' Below this text are four input fields: 'Your Open Market account name (optional):', 'Your E-mail address (optional):', 'Subject:', and 'Your comments:'. The 'Your comments:' field is a large text area with a vertical scrollbar. A 'Submit Feedback' button is located below the text area. At the bottom of the window, a status bar displays 'Data transfer complete:' followed by a row of buttons: 'Back', 'Forward', 'Home', 'Reload', 'Open...', 'Save As...', 'Clone', 'New Window', and 'Close Window'.

File Options Navigate Annotate Help

Document Title: Open Market Feedback

Document URL: http://payment.openmarket.com/ben/feedback.cg

Or if you prefer, you can send your comments via electronic mail to feedback@openmarket.com or via FAX to +1.617.621.1703. If you would like a reply please include your e-mail address.

Your Open Market account name (optional):

Your E-mail address (optional):

Subject:

Your comments:

Submit Feedback

Data transfer complete:

Back Forward Home Reload Open... Save As... Clone New Window Close Window

FIG. 14

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NETWORK SALES SYSTEM

CROSS REFERENCE TO RELATED APPLICATION

This is a continuation of U.S. patent application Ser. No. 08/328,133, filed Oct. 24, 1994, now U.S. Pat. No. 5,715,314.

REFERENCE TO MICROFICHE APPENDICES

Microfiche Appendices A-G are being submitted with the present application, being 4 sheets with 220 total pages.

BACKGROUND OF THE INVENTION

This invention relates to user-interactive network sales systems for implementing an open marketplace for goods or services over computer networks such as the Internet.

U.S. patent application Ser. No. 08/168,519, filed Dec. 16, 1993 by David K. Gifford and entitled "Digital Active Advertising," now abandoned, the entire disclosure of which is hereby incorporated herein in its entirety by reference, describes a network sales system that includes a plurality of buyer computers, a plurality of merchant computers, and a payment computer. A user at a buyer computer asks to have advertisements displayed, and the buyer computer requests advertisements from a merchant computer, which sends the advertisements to the buyer computer. The user then requests purchase of an advertised product, and the buyer computer sends a purchase message to the merchant computer. The merchant computer constructs a payment order that it sends to the payment computer, which authorizes the purchase and sends an authorization message to the merchant computer. When the merchant computer receives the authorization message it sends the product to the buyer computer.

The above-mentioned patent application also describes an alternative implementation of the network sales system in which, when the user requests purchase of an advertised product, the buyer computer sends a payment order directly to the payment computer, which sends an authorization message back to the buyer computer that includes an unforgeable certificate that the payment order is valid. The buyer computer then constructs a purchase message that includes the unforgeable certificate and sends it to the merchant computer. When the merchant computer receives the purchase request it sends the product to the buyer computer, based upon the pre-authorized payment order.

SUMMARY OF THE INVENTION

In one aspect, the invention provides a network-based sales system that includes at least one buyer computer for operation by a user desiring to buy a product, at least one merchant computer, and at least one payment computer. The buyer computer, the merchant computer, and the payment computer are interconnected by a computer network. The buyer computer is programmed to receive a user request for purchasing a product, and to cause a payment message to be sent to the payment computer that comprises a product identifier identifying the product. The payment computer is programmed to receive the payment message, to cause an access message to be created that comprises the product identifier and an access message authenticator based on a cryptographic key, and to cause the access message to be sent to the merchant computer. The merchant computer is programmed to receive the access message, to verify the access message authenticator to ensure that the access

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message authenticator was created using the cryptographic key, and to cause the product to be sent to the user desiring to buy the product.

The invention provides a simple design architecture for the network sales system that allows the merchant computer to respond to payment orders from the buyer computer without the merchant computer having to communicate directly with the payment computer to ensure that the user is authorized to purchase the product and without the merchant computer having to store information in a database regarding which buyers are authorized to purchase which products. Rather, when the merchant computer receives an access message from the buyer computer identifying a product to be purchased, the merchant computer need only check the access message to ensure that it was created by the payment computer (thereby establishing for the merchant computer that the buyer is authorized to purchase the product), and then the merchant computer can cause the product to be sent to the buyer computer who has been authorized to purchase the product.

In another aspect, the invention features a network-based sales system that includes at least one buyer computer for operation by a user desiring to buy products, at least one shopping cart computer, and a shopping cart database connected to the shopping cart computer. The buyer computer and the shopping cart computer are interconnected by a computer network. The buyer computer is programmed to receive a plurality of requests from a user to add a plurality of respective products to a shopping cart in the shopping cart database, and, in response to the requests to add the products, to send a plurality of respective shopping cart messages to the shopping cart computer each of which includes a product identifier identifying one of the plurality of products. The shopping cart computer is programmed to receive the plurality of shopping cart messages, to modify the shopping cart in the shopping cart database to reflect the plurality of requests to add the plurality of products to the shopping cart, and to cause a payment message associated with the shopping cart to be created. The buyer computer is programmed to receive a request from the user to purchase the plurality of products added to the shopping cart and to cause the payment message to be activated to initiate a payment transaction for the plurality of products added to the shopping cart.

In another aspect, the invention features a network-based link message system that includes at least one client computer for operation by a client user and at least one server computer for operation by a server user. The client computer and the server computer are interconnected by a computer network. The client computer is programmed to send an initial link message to the server computer. The server computer is programmed to receive the initial link message from the client computer and to create, based on information contained in the initial link message, a session link message that encodes a state of interaction between the client computer and the server computer. The session link message includes a session link authenticator, computed by a cryptographic function of the session link contents, for authenticating the session link message. The server computer is programmed to cause the session link message to be sent to the client computer. The client computer is programmed to cause the session link message to be sent to a computer in the network that is programmed to authenticate the session link message by examining the session link authenticator and that is programmed to respond to the session link message based on the state of the interaction between the client computer and the server computer.

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In another aspect, the invention features a network-based sales system that includes a merchant database having a plurality of digital advertisements and a plurality of respective product fulfillment items, at least one creation computer for creating the merchant database, and at least one merchant computer for causing the digital advertisements to be transmitted to a user and for causing advertised products to be transmitted to the user. The creation computer and the merchant computer are interconnected by a computer network. The creation computer is programmed to create the merchant database, and to transmit the digital advertisements and the product fulfillment items to the merchant computer. The merchant computer is programmed to receive the digital advertisements and product fulfillment items, to receive a request for a digital advertisement from a user, to cause the digital advertisement to be sent to the user, to receive from the user an access message identifying an advertised product, and to cause the product to be sent to the user in accordance with a product fulfillment item corresponding to the product.

In another aspect, the invention features a hypertext statement system that includes a client computer for operation by a client user and one or more server computers for operation by a server user. The client computer and the server computers are interconnected by a computer network. At least one of the server computers is programmed to record purchase transaction records in a database. Each of the purchase transaction records includes a product description. The server computer is programmed to transmit a statement document that includes the purchase transaction records to the client computer. The client computer is programmed to display the product descriptions, to receive a request from the client user to display a product corresponding to a product description displayed by the client computer, and to cause a product hypertext link derived from a purchase transaction record to be activated. At least one of the server computers is programmed to respond to activation of the product hypertext link by causing the product to be sent to the client computer.

In another aspect, the invention features a network payment system that includes at least one buyer computer for operation by a user desiring to buy a product and at least one payment computer for processing payment messages from the buyer computer. The buyer computer and the payment computer are interconnected by a computer network. The buyer computer is programmed to cause a payment message to be sent to the payment computer. The payment message includes a product identifier identifying the product that the user desires to buy. The payment computer is programmed to receive the payment message, to cause an access message to be created to enable the user to access the product, and to record a purchase transaction record in the settlement database. The buyer computer is programmed to cause a request for purchase transaction records to be sent to the payment computer. The payment computer is programmed to receive the request for purchase transaction records and to cause a document derived from the purchase transaction records to be sent to the buyer computer.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a block diagram of a network sales system in accordance with the present invention.

FIG. 2 (2-A through 2-I) is a flowchart diagram illustrating the operation of a purchase transaction in the network sales system of FIG. 1.

FIG. 3 (3-A through 3-B) is a flowchart diagram illustrating the use of a shopping cart for the purchase of products in connection with the network sales system of FIG. 1.

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FIG. 4 (4-A through 4-C) is a flowchart diagram illustrating the operation of a smart statement in the network sales system of FIG. 1.

FIG. 5 is a screen snapshot of an advertising document that the merchant computer sends to the buyer computer in FIG. 2.

FIG. 6 is a screen snapshot of a confirmation document that the payment computer sends to the buyer computer in FIG. 2.

FIG. 7 is a screen snapshot of a new account document that the payment computer sends to the buyer computer in FIG. 2.

FIG. 8 is a screen snapshot of an account name prompt that the buyer computer creates in FIG. 2.

FIG. 9 is a screen snapshot of a document that the payment computer sends to the buyer computer in FIG. 2 and that provides an option either to repurchase or to use a previously purchased access.

FIG. 10 is a screen snapshot of a fulfillment document that the merchant computer sends to the buyer computer in FIG. 2.

FIG. 11 is a screen snapshot of a smart statement document that the payment computer sends to the buyer computer in FIG. 4.

FIGS. 12 and 13 are screen snapshots of a transaction detail document that the payment computer sends to the buyer computer in FIG. 4.

FIG. 14 is a screen snapshot of a customer service form that the payment computer sends to the buyer computer in FIG. 4.

DETAILED DESCRIPTION

With reference to FIG. 1, a network sales system in accordance with the present invention includes a buyer computer 12 operated by a user desiring to buy a product, a merchant computer 14, which may be operated by a merchant willing to sell products to the buyer or by a manager of the network sales system, a payment computer 16 typically operated by a manager of the network sales system, and a creation computer 20 typically operated by the merchant. The buyer, merchant, payment, and creation computers are all inter-connected by a computer network 10 such as the Internet.

Creation computer 20 is programmed to build a "store" of products for the merchant. A printout of a computer program for use in creating such a "store" in accordance with the present invention is provided as Appendix F.

The products advertised by merchant computer 14 may be, for example, newspaper or newsletter articles available for purchase by buyers. Creation computer 20 creates a digital advertisement database 18 that stores advertising documents (which may for example be in the form of summaries of newspaper or newsletter articles, accompanied by prices) and product fulfillment items (which may be the products themselves if the products can be transmitted over the network, or which may be hard goods identifiers if the products are hard goods, i.e., durable products as opposed to information products). Creation computer 20 transmits contents of the advertising document database 18 to merchant computer 14 to enable the merchant computer to cause advertisements and products to be sent to buyers. Merchant computer 14 maintains advertising documents locally in advertising document database 15. In an alternative embodiment, the creation computer does not have a local digital advertisement database, but instead updates a remote

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advertising document database on a merchant computer. These updates can be accomplished using HTML forms or other remote database technologies as is understood by practitioners of the art.

Payment computer 16 has access to a settlement database 22 in which payment computer 16 can record details of purchase transactions. The products may be organized into various "domains" of products, and payment computer 16 can access settlement database 22 to record and retrieve records of purchases of products falling within the various domains. Payment computer 16 also has access to a shopping cart database 21 in which a "shopping cart" of products that a user wishes to purchase can be maintained as the user shops prior to actual purchase of the contents of the shopping cart.

With reference to FIG. 2, a purchase transaction begins when a user at buyer computer 12 requests advertisements (step 24) and buyer computer 12 accordingly sends an advertising document URL (universal resource locator) to merchant computer 14 (step 26). The merchant computer fetches an advertising document from the advertising document database (step 28) and sends it to the buyer computer (step 30). An example of an advertising document is shown in FIG. 5. Details of URLs and how they are used are found in Appendix G.

The user browses through the advertising document and eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34). Payment URL A includes a product identifier that represents the product the user wishes to buy, a domain identifier that represents a domain of products to which the desired product belongs, a payment amount that represents the price of the product, a merchant computer identifier that represents merchant computer 14, a merchant account identifier that represents the particular merchant account to be credited with the payment amount, a duration time that represents the length of time for which access to the product is to be granted to the user after completion of the purchase transaction, an expiration time that represents a deadline beyond which this particular payment URL cannot be used, a buyer network address, and a payment URL authenticator that is a digital signature based on a cryptographic key. The payment URL authenticator is a hash of other information in the payment URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.

In an alternative embodiment, step 34 consists of the buyer computer sending a purchase product message to the merchant computer, and the merchant computer provides payment URL A to the buyer computer in response to the purchase product message. In this alternative embodiment, payment URL A contains the same contents as above. The buyer computer then sends the payment URL A it has received from the merchant computer to the payment computer.

When the payment computer receives the payment URL it verifies whether the payment URL authenticator was created from the contents of the payment URL using the cryptographic key (step 36). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 38). Otherwise, the payment computer determines whether the expiration time has past (step 40). If it has, the payment computer sends a document to the buyer computer indicating that the time has expired (step 41). Otherwise, the payment computer checks the buyer computer network

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address to see if it matches the one specified in the payment URL (step 42). If it does not match, the payment computer sends a document to the buyer computer indicating that access to the network payment system is denied (step 43).

Otherwise, the payment computer sends a payment confirmation document to the buyer computer, the payment confirmation document including an "open" link and a "continue" link (step 44).

An example of a confirmation document is shown in FIG.

6. The confirmation document asks the user to click on a "continue" button if the user already has an account with the payment computer, or to click on an "open" button if the user does not already have an account and wishes to open one.

If the user clicks on the "open" button (step 46), the buyer computer sends payment URL C to the payment computer (step 48), payment URL C being similar to payment URL A but also indicating that the user does not yet have an account. The payment computer creates a new account document (step 50) and sends it to the buyer computer (step 52). An example of a new account document is shown in FIG. 7. When the user receives the new account document he enters the new account name, an account password, a credit card number, the credit card expiration date, and security information such as the maiden name of the user's mother (step 54), and presses a "submit" button (not shown in FIG. 7). The buyer computer sends the new account information to the payment computer (step 56), which enters the new account in the settlement database (step 58).

If the user clicks on the "continue" button (step 60), the buyer computer sends payment URL B to the payment computer (step 62), payment URL B being similar to payment URL A but also indicating that the user already has an account. The payment computer then instructs the buyer computer to provide the account name and password (steps 64 and 66), and the buyer computer prompts the user for this information by creating an account name prompt (example shown in FIG. 8) and a similar password prompt. The user enters the information (step 68) and the buyer computer sends the account name and password to the payment computer (step 70).

The payment computer verifies whether the user name and password are correct (step 72). If they are not correct, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 74). Otherwise, the payment computer determines whether additional security is warranted, based on, e.g., whether the payment amount exceeds a threshold (step 73). If additional security is warranted, the payment computer creates a challenge form document and sends it to the buyer computer (step 75). The user enters the security information (step 77), the buyer computer sends the security information to the payment computer (step 79), and the payment computer determines whether the security information is correct (step 81). If it is not correct, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 83).

If the security information is correct, or if additional security was not warranted, the payment computer checks the settlement database to determine whether the user has unexpired access to the domain identifier contained in the payment URL (step 82). If so, the payment computer sends to the buyer computer a document providing an option either to repurchase or to use the previously purchased access (step 84). An example of such a document is shown in FIG. 9. The

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user can respond to the recent purchase query document by choosing to access the previously purchased document (step 85) or to go ahead and buy the currently selected product (step 86).

If the user chooses to access the previously purchased document, the buyer computer skips to step 92 (see below). If the user chooses to buy the currently selected product, the payment computer calculates an actual payment amount that may differ from the payment amount contained in the payment URL (step 87). For example, the purchase of a product in a certain domain may entitle the user to access other products in the domain for free or for a reduced price for a given period of time.

The payment computer then verifies whether the user account has sufficient funds or credit (step 76). If not, the payment computer sends a document to the buyer computer indicating that the user account has insufficient funds (step 78). Otherwise, the payment computer creates an access URL (step 80) that includes a merchant computer identifier, a domain identifier, a product identifier, an indication of the end of the duration time for which access to the product is to be granted, the buyer network address, and an access URL authenticator that is a digital signature based on a cryptographic key. The access URL authenticator is a hash of other information in the access URL, the hash being defined by a key shared by the merchant and the operator of the payment computer. The payment computer then records the product identifier, the domain, the user account, the merchant account, the end of duration time, and the actual payment amount in the settlement database (step 88).

The payment computer then sends a redirect to access URL to the buyer computer (step 90), which sends the access URL to the merchant computer (step 92). The merchant computer verifies whether the access URL authenticator was created from the contents of the access URL using the cryptographic key (step 94). If not, the merchant computer sends a document to the buyer computer indicating that access to the product is denied (step 96).

Otherwise, the merchant computer verifies whether the duration time for access to the product has expired (step 98). This is done because the buyer computer can request access to a purchased product repeatedly. If the duration time has expired, the merchant computer sends a document to the buyer computer indicating that the time has expired (step 100). Otherwise the merchant computer verifies that the buyer computer network address is the same as the buyer network address in the access URL (step 101), and if so, sends a fulfillment document to the buyer computer (step 102), which is displayed by the buyer computer (step 104). An example of a fulfillment document is shown in FIG. 10. Otherwise, the merchant computer sends a document to the buyer computer indicating that access is not allowed (step 103).

With reference now to FIG. 3, when the merchant computer sends the advertising document to the buyer computer, the user may request that a product be added to a shopping cart in the shopping cart database rather than request that the product be purchased immediately. The buyer computer sends a shopping cart URL to the payment computer (step 108), the shopping cart URL including a product identifier, a domain identifier, a payment amount, a merchant computer identifier, a merchant account identifier, a duration time, an expiration time, and a shopping cart URL authenticator that is a digital signature based on a cryptographic key. The shopping cart URL authenticator is a hash of other information in the shopping cart URL, the hash being defined by

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a key shared by the merchant and the operator of the payment computer.

The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).

The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).

With reference now to FIG. 4, a user can request display of a "smart statement" that lists purchase transactions for a given month (step 128). When the buyer computer receives such a request, it sends a smart statement URL to the payment computer (step 130).

When the payment computer receives the smart statement URL, it verifies whether the smart statement URL authenticator was created from the contents of the smart statement URL using a cryptographic key (step 132). If not, the payment computer sends a document to the buyer computer indicating that access is denied (step 134). Otherwise, the payment computer checks to determine whether the buyer network address in the smart statement URL matches the buyer computer's actual network address (step 136). If not, the payment computer sends a document to the buyer computer indicating that access is denied (step 138). Otherwise (step 140), the payment computer and buyer computer perform a set of steps analogous to steps 64-81 in FIG. 2 (payment computer requests account name and password, user provides the requested information, and payment computer verifies the information).

In an alternative embodiment steps 132-138 are omitted.

After verification of account information is complete, the payment computer retrieves the requested settlement data from the settlement database, creates a smart statement document for the buyer, and sends the smart statement document to the buyer computer (step 142). An example of a smart statement document is shown in FIG. 11. Each purchase transaction record in the smart statement document includes the data of the transaction, the name of the merchant, an identification of the product, and the payment amount for the product. The smart statement document also includes a transaction detail URL for each purchase transaction (these URLs, or hypertext links, are discussed below and are not shown in FIG. 11). The smart statement docu-

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ment also identifies previous statements that the user may wish to have displayed.

The buyer computer displays the retrieved document (step 144), and the user may request transaction details for a particular transaction listed on the smart statement (step 146). If so, the buyer computer sends a transaction detail URL (or "payment detail URL") to the payment computer (step 148). The transaction detail URL includes a transaction identifier, a buyer network address, and a transaction detail URL authenticator. When the payment computer receives the transaction detail URL, it performs (step 150) a set of steps analogous to steps 132-140 (verification of URL authenticator, buyer network address, and account information). The payment computer then retrieves from the settlement database data corresponding to the payment transaction specified in the transaction detail URL, creates a transaction detail document, and sends it to the buyer computer (step 152).

An example of a transaction detail document is shown in FIGS. 12 and 13. The document displays a number of items of information about the transaction, including the transaction date, end of the duration time ("expiration"), a description of the product, the payment amount, the domain corresponding to the product, an identification of the merchant, and the merchant's address.

The smart statement document and the transaction detail document both include customer service URLs (hypertext links) that allow the user to request customer service (i.e., to send comments and suggestions to the payment computer). When the user requests customer service (step 154), the buyer computer sends the customer service URL to the payment computer (step 156), which creates a customer service form and sends it to the buyer computer (step 158). An example of a customer service form is shown in FIG. 14. The user types comments into the customer service form (step 160), and the buyer computer sends the user's comments to the payment computer (step 162). The payment computer then posts the user comments and sends a thank you document to the buyer computer (step 164).

A user may request display of a product included in the smart statement. When the user requests that the product be displayed (step 166), the buyer computer sends the access URL contained in the smart statement document to the merchant computer (step 168), and the buyer computer and merchant computer perform a set of steps analogous to steps 94-104 in FIG. 2 (authentication of access URL, verification whether duration time has expired, verification of buyer network address, and transmission of fulfillment document to buyer computer).

Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents).

When the present application states that one computer sends a document to another computer, it should be understood that in preferred embodiments the document is a success HTTP response message with the document in the

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body of the message. When the present application states that a server sends an account name and password request message to the client, it should be understood that in preferred embodiments the account name and password request message is an unauthorized HTTP response. A client computer sends account name and password information to a server as part of a request message with an authorization field.

The software architecture underlying the particular preferred embodiment is based upon the hypertext conventions of the World Wide Web. Appendix A describes the Hypertext Markup Language (HTML) document format used to represent digital advertisements, Appendix B describes the HTML forms fill out support in Mosaic 2.0, Appendix C is a description of the Hypertext Transfer Protocol (HTTP) between buyer and merchant computers, Appendix D describes how documents are named with Uniform Resource Locators (URLs) in the network of computers, and Appendix E describes the authentication of URLs using digital signatures.

A printout of a computer program for use in creating and operating such a "store" in accordance with the present invention is provided as Appendix F. A printout of a computer program for use in operating other aspects of the network sales system in accordance with the present invention is provided in Appendix G.

There has been described a new and useful network-based sales system. It is apparent that those skilled in the art may make numerous modifications and departures from the specific embodiments described herein without departing from the spirit and scope of the claimed invention.

What is claimed is:

1. A network-based sales system, comprising:

a merchant database comprising a plurality of digital advertisements and a plurality of respective product fulfillment items;

at least one creation computer for creating said merchant database; and

at least one merchant computer for causing said digital advertisements to be transmitted to a user and for causing advertised products to be transmitted to said user;

said creation computers, said merchant computer, and a payment computer being interconnected by a public packet switched computer network;

said creation computer being programmed to create said merchant database, and to transmit said digital advertisements and said product fulfillment items over said network to said merchant computer;

said merchant computer being programmed to receive said digital advertisements and product fulfillment items over said network, to receive over said network a request for a digital advertisement from a user, to cause said digital advertisement to be sent to said user over said network, to receive over said network from said user a product request message identifying an advertised product, to receive an access message over said network created by said payment computer, and to cause said product to be sent to said user in accordance with a product fulfillment item corresponding to said product and based upon receipt by the merchant computer of the access message.

2. A network-based sales system in accordance with claim 1, wherein each of said digital advertisements comprises an abstract of a product and a price.

3. A network-based sales system in accordance with claim 2, wherein:

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at least one of said product fulfillment items comprises a product itself; and
 said creation computer is programmed to transmit said product to said merchant computer with said digital advertisements.

4. A network-based sales system in accordance with claim 2, wherein:
 at least one of said product fulfillment items comprises a hard good identifier; and
 said creation computer is programmed to transmit said hard good identifier to said merchant computer with said digital advertisements.

5. A method of operating a merchant computer in a network-based sales system comprising a merchant database that comprises a plurality of digital advertisements and a plurality of respective product fulfillment items, at least one creation computer for creating said merchant database, and at least one merchant computer for causing said digital advertisements to be transmitted to a user and for causing advertised products to be transmitted to said user, and at least one payment computer, said creation computer, said merchant computer, and said payment computer being interconnected by a public packet switched computer network, said method comprising the steps of:
 receiving, at said merchant computer, said digital advertisements and said product fulfillment items, said digital advertisements and said product fulfillment items having been transmitted over said network to said merchant computer by said creation computer, said merchant database comprising said digital advertisements and said product fulfillment items having been created by said creation computer;
 receiving over said network a request for a digital advertisement from a user;
 causing said digital advertisement to be sent to said user over said network;
 receiving over said network from said user a product request message identifying an advertised product;
 receiving over said network an access message created by said payment computer; and
 causing said product to be sent to said user in accordance with a product fulfillment item corresponding to said product and based upon receipt by the merchant computer of the access message.

6. A hypertext statement system, comprising:
 a client computer for operation by a client user; and
 a plurality of server computers for operation by a server user;
 said client computer and said server computers being interconnected by a public packet switched computer network;
 at least one of said server computers being programmed to record information pertaining to purchase transaction records in a database, each of said purchase transaction records comprising a product description, and to cause a statement document comprising said purchase transaction records to be transmitted to said client computer over said network;
 said client computer being programmed to display said product descriptions, to receive a request from said client user to display a product corresponding to a product description displayed by said client computer, and to cause a product hypertext link derived from a purchase transaction record to be activated;
 at least one of said server computers, other than a server computer that transmitted said statement document to

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said client computer, being programmed to respond to activation of said product hypertext link by causing said product to be sent to said client computer over said network.

7. A hypertext statement system in accordance with claim 6, wherein:
 said client computer is programmed to receive a request from said client user to display transaction details corresponding to a product description displayed by said client computer and to cause a transaction detail hypertext link corresponding to said product description to be activated; and
 at least one of said server computers is programmed to respond to activation of said transaction detail hypertext link by transmitting said transaction details to said client computer as a transaction detail document.

8. A hypertext statement system in accordance with claim 7, wherein:
 said transaction detail document further comprises a customer service form hypertext link;
 said client computer is programmed to receive a request from said client user to display a customer service form and to cause said customer service form hypertext link to be activated; and
 at least one of said server computers is programmed to respond to activation of said customer service form hypertext link by transmitting said customer service form to said client computer.

9. A hypertext statement system in accordance with claim 6, wherein:
 said statement document further comprises a customer service form hypertext link;
 said client computer is programmed to receive a request from said client user to display a customer service form and to cause said customer service form hypertext link to be activated; and
 at least one of said server computers is programmed to respond to activation of said customer service form hypertext link by transmitting said customer service form to said client computer.

10. A method of operating a server computer in a hypertext statement system comprising a client computer for operation by a client user, and a plurality of server computers for operation by a server user, said client computer and said server computers being interconnected by a public packet switched computer network, said method comprising the steps of:
 recording, at one of said server computers, information pertaining to purchase transaction records in a database, each of said purchase transaction records comprising a product description; and
 causing a statement document comprising said purchase transaction records to be transmitted to said client computer over said network;
 said client computer being programmed to display said product descriptions, to receive a request from said client user to display a product corresponding to a product description displayed by said client computer, and to cause a product hypertext link derived from a purchase transaction record to be activated;
 at least one of said server computers, other than a server computer that transmitted said statement document to said client computer, being programmed to respond to activation of said product hypertext link by causing said product to be sent to said client computer over said network.

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11. A network payment system, comprising:
 at least one buyer computer for operation by a user
desiring to buy a product; and
 at least one payment computer for processing payment
 messages from said buyer computer;
 said buyer computer, said payment computer, and a mer-
 chant computer being interconnected by a public packet
 switched computer network;
 said buyer computer being programmed to cause a pay-
 ment message to be sent to said payment computer over
 said network;
 said payment computer being programmed to receive said
 payment message, to cause an access message to be
 created for transmission over said network to said
 merchant computer to enable said user to access said
 product upon verification by said merchant computer
 that said access message was created by said payment
 computer, and to record information pertaining to a
 purchase transaction record in said settlement database;
 said buyer computer being programmed to cause a request
 for a purchase transaction record to be sent to said
 payment computer over said network; and
 said payment computer being programmed to receive said
 request for said purchase transaction record and to
 cause a document derived from said purchase transac-
 tion record to be sent to said buyer computer over said
 network.

12. The network payment system of claim 11 wherein the
 payment message comprises a product identifier identifying
 the product that the user desires to buy.

13. A method of operating a payment computer in a
 network payment system comprising at least one buyer
 computer for operation by a user desiring to buy a product,
 and at least one payment computer for processing payment
 messages from said buyer computer, and at least one mer-
 chant computer, said buyer computer, said payment
 computer, and said merchant computer being interconnected
 by a public packet switched computer network, said method
 comprising the steps of:
 receiving, at said payment computer, a payment message
 that said buyer computer has caused to be sent to said
 payment computer over said network;
 causing an access message to be created for transmission
 to a merchant computer over said network to enable
 said user to access said product upon verification by
 said merchant computer that said access message was
 created by said payment computer;
 recording information pertaining to a purchase transaction
 record in said settlement database;
 receiving over said network a request for a purchase
 transaction record that said buyer computer has caused
 to be sent to said payment computer; and
 causing a document derived from said purchase transac-
 tion record to be sent to said buyer computer over said
 network.

14. The method of claim 13 wherein the payment message
 comprises a product identifier identifying the product that
 the user desires to buy.

15. A hypertext statement system, comprising:
 a client computer for operation by a client user; and
 one or more server computers for operation by a server
 user;
 the client computer and the server computers being inter-
 connected by a public packet switched computer net-
 work;

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at least one of the server computers being programmed to
 record information pertaining to purchase transaction
 records in a database, and to transmit a statement
 document comprising the purchase transaction records
 to the client computer over the network;
 the client computer being programmed to display the
 statement document to receive a request from the client
 user to display transaction details corresponding to a
 portion of the statement document displayed by the
 client computer, and to cause a transaction detail hyper-
 text link corresponding to the portion of the statement
 document to be activated;
 at least one of the server computers being programmed to
 respond to activation of the transaction detail hypertext
 link by transmitting the transaction details to the client
 computer over the network as a transaction detail
 document.

16. A method of operating a server computer in a hyper-
 text statement system comprising a client computer for
 operation by a client user, and one or more server computers
 for operation by a server user, the client computer and the
 server computers being interconnected by a public packet
 switched computer network, the method comprising the
 steps of:
 recording, at one of the server computers, information
 pertaining to purchase transaction records in a data-
 base; and
 transmitting a statement document comprising the pur-
 chase transaction records to the client computer over
 the network;
 the client computer being programmed to display the
 statement document, to receive a request from the
 client user to display transaction details corresponding
 to a portion of the statement document displayed by the
 client computer, and to cause a transaction detail hyper-
 text link corresponding to the portion of the statement
 document to be activated;
 at least one of the server computers being programmed to
 respond to activation of the transaction detail hypertext
 link by transmitting the transaction details to the client
 computer over the network as a transaction detail
 document.

17. A network-based sales system, comprising:
 at least one buyer computer for operation by a user
 desiring to buy products;
 at least one shopping cart computer; and
 a shopping cart database connected to the shopping cart
 computer;
 the buyer computer and the shopping cart computer being
 interconnected by a public packet switched computer
 network;
 the buyer computer being programmed to receive a plu-
 rality of requests from a user to add a plurality of
 respective products to a shopping cart in the shopping
 cart database, and, in response to the requests to add the
 products, to send a plurality of respective shopping cart
 messages over the network to the shopping cart com-
 puter each of which comprises a product identifier
 identifying one of the plurality of products and at least
 one of which comprises a universal resource locator;
 the shopping cart computer being programmed to receive
 the plurality of shopping cart messages, to modify the
 shopping cart in the shopping cart database to reflect
 the plurality of requests to add the plurality of products
 to the shopping cart, and to cause a payment message

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associated with the shopping cart to be created, the payment message comprising a universal resource locator; and

the buyer computer being programmed to receive a request from the user to purchase the plurality of products added to the shopping cart and to cause the payment message to be activated to initiate a payment transaction for the plurality of products added to the shopping cart;

the shopping cart being a stored representation of a collection of products, the shopping cart database being a database of stored representations of collections of products, and the shopping cart computer being a computer that modifies the stored representations of collections of products in the database.

18. A method of operating a shopping cart computer in a public packet switched computer network comprising at least one buyer computer for operation by a user desiring to buy products, at least one shopping cart computer, and a shopping cart database connected to the shopping cart computer, the method comprising the steps of:

receiving, at the shopping cart computer, a plurality of shopping cart messages sent over the network to the shopping cart computer by the buyer computer in response to receipt of a plurality of requests from a user to add a plurality of respective products to a shopping cart in the shopping cart database, each of the shopping cart messages comprising a product identifier identifying one of the plurality of products and at least one of which comprises a universal resource locator;

modifying the shopping cart in the shopping cart database to reflect the plurality of requests to add the plurality of products to the shopping cart; and

causing a payment message associated with the shopping cart to be created, the payment message comprising a universal resource locator;

the buyer computer being programmed to receive a request from the user to purchase the plurality of products added to the shopping cart and to cause the payment message to be activated to initiate a payment transaction for the plurality of products added to the shopping cart;

the shopping cart being a stored representation of a collection of products, the shopping cart database being a database of stored representations of collections of products, and the shopping cart computer being a computer that modifies the stored representations of collections of products in the database.

19. A network-based sales system, comprising:
at least one buyer computer for operation by a user desiring to buy a product;

at least one merchant computer; and

at least one payment computer;

the buyer computer, the merchant computer, and the payment computer being interconnected by a computer network;

the buyer computer being programmed to receive a user request for purchasing a product, and to cause a payment message to be sent to the payment computer that comprises a product identifier identifying the product;

the payment computer being programmed to receive the payment message, to cause an access message to be created that comprises a product identifier identifying the product and an access message authenticator based on a cryptographic key, and to cause the access message to be sent to the merchant computer; and

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the merchant computer being programmed to receive the access message, to cause the access message authenticator to be verified to ensure that the access message authenticator was created using the cryptographic key, and to cause the product to be received by the user desiring to buy the product.

20. A network-based sales system in accordance with claim 19 wherein the buyer computer is programmed to cause the payment message to be sent to the payment computer by sending a purchase product message to the merchant computer, the merchant computer being programmed to receive the purchase product message, and in response thereto, to send the payment message to the payment computer.

21. A network-based sales system in accordance with claim 19 wherein the merchant computer is programmed itself to verify the access message authenticator.

22. A network-based sales system in accordance with claim 19 wherein the merchant computer is programmed to cause every access message authenticator received by the merchant computer to be verified.

23. A network-based sales system in accordance with claim 19, wherein the payment message comprises a payment amount.

24. A network-based sales system in accordance with claim 19, wherein the payment computer is programmed to record the product identifier and the payment amount.

25. A network-based sales system in accordance with claim 24, wherein the product identifier and the payment amount are recorded in a settlement database.

26. A network-based sales system in accordance with claim 19, wherein the payment message comprises a merchant computer identifier.

27. A network-based sales system in accordance with claim 19, wherein the payment message comprises a payment message authenticator based on a cryptographic key.

28. A network-based sales system in accordance with claim 27, wherein the payment computer is programmed to verify the payment message authenticator to ensure that the payment message authenticator was created using the cryptographic key.

29. A network-based sales system in accordance with claim 19 wherein the computer network is a public packet-switched communications network.

30. A method of operating a payment computer in a computer network comprising at least one buyer computer for operation by a user desiring to buy a product, at least one merchant computer, and at least one payment computer, the method comprising the steps of:

receiving, at the payment computer, a payment message that the buyer computer has caused to be sent to the payment computer in response to a user request for purchasing a product, the payment message comprising a product identifier identifying the product;

causing an access message to be created that comprises a product identifier identifying the product and an access message authenticator based on a cryptographic key; and

causing the access message to be sent to the merchant computer, the merchant computer being programmed to receive the access message, to cause the access message authenticator to be verified to ensure that the access message authenticator was created using the cryptographic key, and to cause the product to be received by the user desiring to buy the product.

31. A network-based sales system, comprising:
at least one buyer computer for operation by a user desiring to buy a product;

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at least one merchant computer; and
 at least one payment computer;
 the buyer computer, the merchant computer, and the
 payment computer being interconnected by a public
 packet switched computer network;
 the buyer computer being programmed to receive a
 request from a user for purchasing a product, and to
 cause a payment message to be sent over the network
 to the payment computer;
 the payment computer being programmed to receive the
 payment message, and, if purchase of the product by
 the user has not been previously recorded in a settle-
 ment database, to cause the user to be charged for the
 product and to create a new record in the settlement
 database reflecting purchase of the product by the user,
 to cause an access message to be created, and to cause
 the access message to be sent over the network to the
 merchant computer; and
 the merchant computer being programmed to receive the
 access message and to cause the user to receive the
 product.
 32. The network-based sales system of claim 31 wherein:
 the payment computer is programmed to cause the access
 message to be created using a cryptographic key; and
 at least one of the computers is programmed to use the
 access message in a cryptographic process to ensure
 that the user has paid for the product.
 33. A method of operating a payment computer in a public
 packet switched computer network comprising at least one
 buyer computer for operation by a user desiring to buy
 a product, at least one merchant computer, and at least one
 payment computer, the method comprising the steps of:
 receiving, at the payment computer, a payment message
 that the buyer computer has caused to be sent over the
 network to the payment computer in response to a
 request from a user for purchasing a product, and, if
 purchase of the product by the user has not been
 previously recorded in a settlement database, causing
 the user to be charged for the product and creating a
 new record in the settlement database reflecting pur-
 chase of the product by the user;
 causing an access message to be created; and
 causing the access message to be sent over the network to
 the merchant computer, the merchant computer being
 programmed to receive the access message and to cause
 the user to receive the product.
 34. The method of claim 33 wherein at least one of the
 computers is programmed to use the access message in a
 cryptographic process to ensure that the user has paid for the
 product.
 35. A network-based sales system, comprising:
 at least one buyer computer for operation by a user
 desiring to buy products;
 at least one shopping cart computer; and
 a shopping cart database connected to the shopping cart
 computer;
 the buyer computer and the shopping cart computer being
 interconnected by a public packet switched computer
 network;
 the buyer computer being programmed to receive a plu-
 rality of requests from a user to add a plurality of
 respective products to a shopping cart in the shopping
 cart database, and, in response to the requests to add the
 products, to send a plurality of respective shopping cart

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messages over the network to the shopping cart com-
 puter each of which comprises a product identifier
 identifying one of the plurality of products;
 the shopping cart computer being programmed to receive
 the plurality of shopping cart messages, and to modify
 the shopping cart in the shopping cart database to
 reflect the plurality of requests to add the plurality of
 products to the shopping cart; and
 the buyer computer being programmed to receive a
 request from the user to purchase the plurality of
 products added to the shopping cart and to cause a
 payment message to be activated to initiate a payment
 transaction for the plurality of products added to the
 shopping cart;
 the shopping cart being a stored representation of a
 collection of products, the shopping cart database being
 a database of stored representations of collections of
 products, and the shopping cart computer being a
 computer that modifies the stored representations of
 collections of products in the database.
 36. A method of operating a shopping cart computer in a
 public packet switched computer network comprising at
 least one buyer computer for operation by a user desiring to
 buy products, at least one shopping cart computer, and a
 shopping cart database connected to the shopping cart
 computer, the method comprising the steps of:
 receiving, at the shopping cart computer, a plurality of
 shopping cart messages sent over the network to the
 shopping cart computer by the buyer computer in
 response to receipt of a plurality of requests from a user
 to add a plurality of respective products to a shopping
 cart in the shopping cart database, each of the shopping
 cart messages comprising a product identifier identify-
 ing one of the plurality of products; and
 modifying the shopping cart in the shopping cart database
 to reflect the plurality of requests to add the plurality of
 products to the shopping cart;
 the buyer computer being programmed to receive a
 request from the user to purchase the plurality of
 products added to the shopping cart and to cause a
 payment message to be activated to initiate a payment
 transaction for the plurality of products added to the
 shopping cart;
 the shopping cart being a stored representation of a
 collection of products, the shopping cart database being
 a database of stored representations of collections of
 products, and the shopping cart computer being a
 computer that modifies the stored representations of
 collections of products in the database.
 37. A network-based sales system, comprising:
 a merchant database comprising a plurality of digital
 advertisements and a plurality of respective product
 fulfillment items;
 at least one creation computer for creating the merchant
 database; and
 at least one merchant computer for causing the digital
 advertisements to be transmitted to a user and for
 causing advertised products to be transmitted to the
 user;
 the creation computer and the merchant computer being
 interconnected by a public packet switched computer
 network;
 the creation computer being programmed to create the
 merchant database, and to transmit the digital adver-
 tisements and the product fulfillment items over the
 network to the merchant computer;

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the merchant computer being programmed to receive the digital advertisements and product fulfillment items over the network, to receive over the network a request for a digital advertisement from a user, to cause the digital advertisement to be sent to the user over the network, to receive over the network from the user a product request message identifying an advertised product, and to cause the product to be sent to the user in accordance with a product fulfillment item corresponding to the product;

at least a portion of the digital advertisements transmitted by the creation computer to the merchant computer over the network being authenticated by at least one digital signature.

38. A method of operating a merchant computer in a network-based sales system comprising a merchant database that comprises a plurality of digital advertisements and a plurality of respective product fulfillment items, at least one creation computer for creating the merchant database, and at least one merchant computer for causing the digital advertisements to be transmitted to a user and for causing advertised products to be transmitted to the user, the creation computer and the merchant computer being interconnected by a public packet switched computer network, the method comprising the steps of:

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receiving, at the merchant computer, the digital advertisements and the product fulfillment items, the digital advertisements and the product fulfillment items having been transmitted over the network to the merchant computer by the creation computer, the merchant database comprising the digital advertisements and the product fulfillment items having been created by the creation computer;

receiving over the network a request for a digital advertisement from a user;

causing the digital advertisement to be sent to the user over the network;

receiving over the network from the user a product request message identifying an advertised product; and causing the product to be sent to the user in accordance with a product fulfillment item corresponding to the product;

at least a portion of the digital advertisements transmitted by the creation computer to the merchant computer over the network being authenticated by at least one digital signature.

* * * * *

EXHIBIT D



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(12) **EX PARTE REEXAMINATION CERTIFICATE (5845th)**
United States Patent
Payne et al.

(10) Number: **US 5,909,492 C1**
 (45) Certificate Issued: ***Aug. 7, 2007**

(54) NETWORK SALES SYSTEM

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(75) Inventors: **Andrew C. Payne, Lincoln, MA (US);**
Lawrence C. Stewart, Burlington, MA
(US); David J. Mackle, Brookdale, CA
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(US)

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Reexamination Certificate for:

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G06Q 30/00 (2006.01)
G06Q 10/00 (2006.01)
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(52) U.S. Cl. **705/78; 705/26; 705/27;**
705/39; 705/40; 705/44

(58) Field of Classification Search None
 See application file for complete search history.

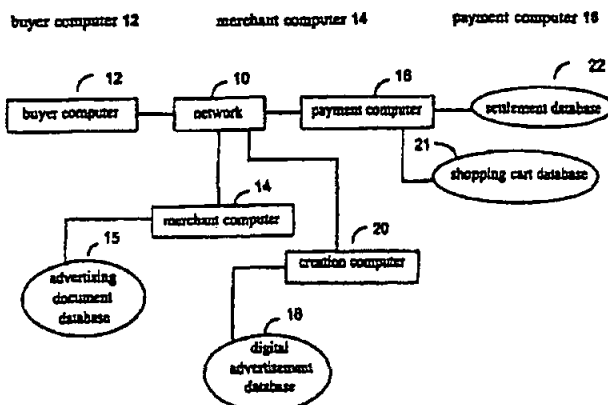
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(57) ABSTRACT

A network-based sales system includes at least one buyer computer for operation by a user desiring to buy a product, at least one merchant computer, and at least one payment computer. The buyer computer, the merchant computer, and the payment computer are interconnected by a computer network. The buyer computer is programmed to receive a user request for purchasing a product, and to cause a payment message to be sent to the payment computer that comprises a product identifier identifying the product. The payment computer is programmed to receive the payment message, to cause an access message to be created that comprises the product identifier and an access message authenticator based on a cryptographic key, and to cause the access message to be sent to the merchant computer. The merchant computer is programmed to receive the access message, to verify the access message authenticator to ensure that the access message authenticator was created using the cryptographic key, and to cause the product to be sent to the user desiring to buy the product.



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Exhibit 2 of Geringer Declaration: E-mail from Brooks Cutter to Mike Kuniavsky (Jun. 14, 1994).

Exhibit 3 of Geringer Declaration: Excerpts of Deposition of Richard Boake.

Exhibit 5 of Geringer Declaration: Excerpts of Deposition of Andrew Payne.

Exhibit 6 of Geringer Declaration: E-mail from Andrew Payne to Winfield Treese, et al. (Jun. 15, 1994).

Exhibit 7 of Geringer Declaration: Excerpts of Deposition of Winfield Treese.

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**EX PARTE
REEXAMINATION CERTIFICATE
ISSUED UNDER 35 U.S.C. 307**

THE PATENT IS HEREBY AMENDED AS
INDICATED BELOW.

Matter enclosed in heavy brackets [] appeared in the patent, but has been deleted and is no longer a part of the patent; matter printed in *italics* indicates additions made to the patent.

AS A RESULT OF REEXAMINATION, IT HAS BEEN DETERMINED THAT:

The patentability of claims 1-38 is confirmed.

New claims 39-108 are added and determined to be patentable.

39. A hypertext statement system in accordance with claim 15, wherein the network is an Internet.

40. A hypertext statement system in accordance with claim 15, wherein the client computer is a buyer computer, and at least one of the server computers is a payment computer.

41. A hypertext statement system in accordance with claim 15, wherein the statement document is sent by at least one of the server computers to the client computer in response to a statement URL sent by the client computer to at least one of the server computers.

42. A hypertext statement system in accordance with claim 41, wherein the statement URL includes a URL authenticator that is a digital signature based on a cryptographic key; wherein the URL authenticator is a hash of information contained in the statement URL; wherein at least one of the server computers verifies whether the statement URL authenticator was created based upon the information contained in the statement URL using the cryptographic key.

43. A hypertext statement system in accordance with claim 42, wherein if verification by at least one of the server computers fails, then at least one of the server computers sends a document to the client computer indicating that access is denied.

44. A hypertext statement system in accordance with claim 42, wherein the statement URL comprises a client computer network address;

wherein the client computer network address is verified by matching it with the network address specified in the statement URL.

45. A hypertext statement system in accordance with claim 44, wherein if verification fails, then at least one of the server computers sends a document to the client computer indicating that access is denied.

46. A hypertext statement system in accordance with claim 42, wherein the client computer prompts the user for an account name and password by creating an account name prompt and a password prompt.

47. A hypertext statement system in accordance with claim 46, wherein at least one of the server computers verifies that the account name and password provided by the user match a previously provided account name and password.

48. A hypertext statement system of claim 47, wherein if the account name and password verification fails, then at least one of the server computers sends a document to the client computer indicating that access to at least a portion of a network sales system is denied.

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49. A hypertext statement system of claim 44, wherein if a payment amount exceeds a threshold, then the user is prompted for security-related information;

wherein at least one of the server computers verifies that the security-related information matches previously provided security-related information.

50. A hypertext statement system in accordance with claim 49, wherein if the security-related verification fails, then the payment computer sends a document to the buyer computer indicating that access is not allowed.

51. A hypertext statement system in accordance with claim 49, wherein at least one of the server computers transmits the statement document to the client computer, and the client computer displays the statement document to the user.

52. A hypertext statement system in accordance with claim 51, wherein the client computer is a buyer computer; wherein at least one of the server computers retrieves settlement data from a settlement database for use in generating the statement document.

53. A hypertext statement system in accordance with claim 15, wherein the transaction detail hypertext link includes a transaction detail URL;

wherein the transaction detail URL includes a URL authenticator that is a digital signature based on a cryptographic key;

wherein the URL authenticator is a hash of information contained in the transaction detail URL;

wherein at least one of the server computers verifies whether the transaction detail authenticator was created from information contained in the transaction detail URL based upon the cryptographic key;

wherein the transaction detail URL comprises a client network address;

wherein the client computer network address is verified by matching it with the network address specified in the transaction detail URL;

wherein the client computer prompts the user for an account name and password by creating an account name prompt and a password prompt;

wherein at least one of the server computers verifies that the account name and password entered by the user match a previously provided account name and password;

wherein if a payment amount exceeds a threshold, then the user is prompted for security-related information;

wherein at least one of the server computers verifies that the security-related information matches previously provided security-related information.

54. A hypertext statement system in accordance with claim 53, wherein the client computer is a buyer computer, and at least one of the server computers is a payment computer.

55. A hypertext statement system in accordance with claim 15, wherein the user requests customer service;

wherein in response to the user request, the client computer sends a customer service URL to at least one of the server computers, and at least one of the server computers creates a customer service form and sends the form to the client computer;

wherein the form contains an area for the user to provide comments.

56. A hypertext statement system in accordance with claim 55, wherein the client computer sends the user's comments to at least one of the server computers;

wherein at least one of the server computers processes the user comments.

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57. A hypertext statement system in accordance with claim 15, wherein the user requests display of a product listed on the statement document.

58. A hypertext statement system in accordance with claim 57, wherein the client computer sends an access URL to a second server computer.

59. A hypertext statement system in accordance with claim 58, wherein the access URL comprises an authenticator based on a cryptographic key;

wherein the access URL authenticator is a hash of other information in the access URL;

wherein the second server computer verifies whether the access URL authenticator was created from information contained in the access URL using a cryptographic key;

wherein the access URL comprises a duration of time for access indicator, and the second server computer verifies whether the duration time for access has expired; wherein the access URL comprises a buyer network address indicator, and the second server computer verifies that a buyer computer network address is the same as the buyer network address indicated in the access URL;

wherein the second server transmits a fulfillment document to the client computer.

60. A hypertext statement system in accordance with claim 15, wherein the statement document includes information on transactions by the user that took place in a given month.

61. A hypertext statement system in accordance with claim 60, wherein the information on transactions by the user includes at least one of the following types of information: a date of transaction, an identification of the product, a payment amount, and a merchant identifier.

62. A hypertext statement system in accordance with claim 60, wherein the statement document also includes one or more links to information regarding previous transactions by the user.

63. A hypertext statement system in accordance with claim 60, wherein for a transaction there is a transaction detail URL that includes a transaction identifier, a buyer network address, and a transaction detail URL authenticator.

64. A hypertext statement system in accordance with claim 63, wherein at least one of the server computers receives the transaction detail URL;

wherein the transaction detail URL includes a URL authenticator that is a digital signature based on a cryptographic key;

wherein the URL authenticator is a hash of information contained in the transaction detail URL;

wherein at least one of the server computers verifies whether the transaction detail URL authenticator was created from information contained in the transaction detail URL using the cryptographic key;

wherein the transaction detail URL comprises a client computer network address, and the client computer network address is verified by matching it with the network address specified in the transaction detail URL;

wherein the client computer prompts the user for an account name and password by creating an account name prompt and a password prompt, and at least one of the server computers verifies that the account name and password entered by the user match a previously provided account name and password;

wherein if a verification by at least one of the server computers fails, then at least one of the server com-

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puters sends a document to the client computer indicating that access is denied.

65. A hypertext statement system of claim 15, wherein if a payment amount provided by the user exceeds a threshold, then the user is prompted for security-related information, and at least one of the server computers verifies that the security information matches previously provided security-related information.

66. A hypertext statement system in accordance with claim 15, wherein the transaction detail document includes transaction information and merchant information.

67. A hypertext statement system in accordance with claim 66, wherein the transaction information includes at least one of the following types of information: a URL where a product is located, a transaction log identifier, a currency type used, a transaction date, an expiration time, an initiator number, a product description, a transaction amount, a beneficiary number, an IP address, a transaction type indicator, and a domain corresponding to the product.

68. A hypertext statement system in accordance with claim 66, wherein the merchant information includes at least one of the following types of information: a merchant telephone number, a merchant address, a merchant FAX number, a merchant e-mail address, a merchant principal name, a merchant home URL, and a merchant country.

69. A hypertext statement system in accordance with claim 66, wherein the transaction detail document comprises a customer feedback form, including the following fields for data entry by the user: account name, e-mail address, subject, and comments.

70. A hypertext statement system in accordance with claim 69, wherein the customer feedback form includes a hyperlink that a user activates to send the form to at least one of the server computers.

71. A hypertext statement system in accordance with claim 66, wherein the transaction detail document comprises a message to the user inviting comments by e-mail and giving an e-mail address.

72. A hypertext statement system in accordance with claim 66, wherein the transaction detail document further comprises a message to the user inviting comments by FAX and giving a FAX number.

73. A hypertext statement system in accordance with claim 15, wherein a digital advertising document is provided to the client computer.

74. The method of claim 16, wherein the network is an Internet.

75. The method of claim 16, wherein the client computer is a buyer computer, and at least one of the server computers is a payment computer.

76. The method of claim 16, wherein the statement document is sent by at least one of the server computers to the client computer in response to a statement URL sent by the client computer to at least one of the server computers.

77. The method of claim 76, wherein the statement URL includes a URL authenticator that is a digital signature based on a cryptographic key;

wherein the URL authenticator is a hash of information contained in the statement URL;

wherein at least one of the server computers verifies whether the statement URL authenticator was created based upon the information contained in the statement URL using the cryptographic key.

78. The method of claim 77, wherein if verification by at least one of the server computers fails, then at least one of the server computers sends a document to the client computer indicating that access is denied.

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79. The method of claim 77, wherein the statement URL comprises a client computer network address;

wherein the client computer network address is verified by matching it with the network address specified in the statement URL.

80. The method of claim 79, wherein if verification fails, then at least one of the server computers sends a document to the client computer indicating that access is denied.

81. The method of claim 77, wherein the client computer prompts the user for an account name and password by creating an account name prompt and a password prompt.

82. The method of claim 81, wherein at least one of the server computers verifies that the account name and password provided by the user match a previously provided account name and password.

83. The method of claim 82, wherein if the account name and password verification fails, then at least one of the server computers sends a document to the client computer indicating that access to at least a portion of a network sales system is denied.

84. The method of claim 79, wherein if a payment amount exceeds a threshold, then the user is prompted for security-related information;

wherein at least one of the server computers verifies that the security-related information matches previously provided security-related information.

85. The method of claim 84, wherein if the security-related verification fails, then the payment computer sends a document to the buyer computer indicating that access is not allowed.

86. The method of claim 84, wherein at least one of the server computers transmits the statement document to the client computer and the client computer displays the statement document to the user.

87. The method of claim 86, wherein the client computer is a buyer computer;

wherein at least one of the server computers retrieves settlement data from a settlement database for use in generating the statement document.

88. The method of claim 16, wherein the transaction detail hypertext link includes a transaction detail URL;

wherein the transaction detail URL includes a URL authenticator that is a digital signature based on a cryptographic key;

wherein the URL authenticator is a hash of information contained in the transaction detail URL;

wherein at least one of the server computers verifies whether the transaction detail URL authenticator was created from information contained in the transaction detail URL based upon the cryptographic key;

wherein the transaction detail URL comprises a client network address;

wherein the client computer network address is verified by matching it with the network address specified in the transaction detail URL;

wherein the client computer prompts the use for an account name and password by creating an account name prompt and a password prompt;

wherein at least one of the server computers verifies that the account name and password entered by the user match a previously provided account name and password;

wherein if a payment amount exceeds a threshold, then the user is prompted for security-related information;

wherein at least one of the server computers verifies that the security-related information matches previously provided security-related information.

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89. The method of claim 88, wherein the client computer is a buyer computer, and at least one of the server computers is a payment computer.

90. The method of claim 16, wherein the user requests customer service;

wherein in response to the user request, the client computer sends a customer service URL to at least one of the server computers, and at least one of the server computers creates a customer service form and sends the form to the client computer;

wherein the form contains an area for the user to provide comments.

91. The method of claim 90, wherein the client computer sends the user's comments to at least one of the server computers;

wherein at least one of the server computers processes the user comments.

92. The method of claim 16, wherein the user requests display of a product listed on the statement document.

93. The method of claim 92, wherein the client computer sends an access URL to a second server computer.

94. The method of claim 93, wherein the access URL comprises an authenticator based on a cryptographic key;

wherein the access URL authenticator is a hash of other information in the access URL;

wherein the second server computer verifies whether the access URL authenticator was created from information contained in the access URL using a cryptographic key;

wherein the access URL comprises a duration of time for access indicator, and the second server computer verifies whether the duration time for access has expired;

wherein the access URL comprises a buyer network address indicator, and the second server computer verifies that a buyer computer network address is the same as the buyer network address indicated in the access URL;

wherein the second server transmits a fulfillment document to the client computer.

95. The method of claim 16, wherein the statement document includes information on transactions by the user that took place in a given month.

96. The method of claim 95, wherein the information on transactions by the user includes at least one of the following types of information: a date of transaction, an identification of the product, a payment amount, and a merchant identifier.

97. The method of claim 95, wherein the statement document also includes one or more links to information regarding previous transactions by the user.

98. The method of claim 95, wherein for a transaction there is a transaction detail URL that includes a transaction identifier, a buyer network address, and a transaction detail URL authenticator.

99. The method of claim 98, wherein at least one of the server computers receives the transaction detail URL;

wherein the transaction detail URL includes a URL authenticator that is a digital signature based on a cryptographic key;

wherein the URL authenticator is a hash of information contained in the transaction detail URL;

wherein at least one of the server computers verifies whether the transaction detail URL authenticator was created from information contained in the transaction detail URL using the cryptographic key;

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wherein the transaction detail URL comprises a client computer network address, and the client computer network address is verified by matching it with the network address specified in the transaction detail URL;

wherein the client computer prompts the user for an account name and password by creating an account name prompt and a password prompt, and at least one of the server computers verifies that the account name and password entered by the user match a previously provided account name and password;

wherein if a verification by at least one of the server computers fails, then at least one of the server computers sends a document to the client computer indicating that access is denied.

100. The method of claim 16, wherein if a payment amount provided by the user exceeds a threshold, then the user is prompted for security-related information, and at least one of the server computers verifies that the security information matches previously provided security-related information.

101. The method of claim 16, wherein the transaction detail document includes transaction information and merchant information.

102. The method of claim 101, wherein the transaction information includes at least one of the following types of information: a URL where a product is located, a transaction log identifier, a currency type used, a transaction date,

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an expiration time, an initiator number, a product description, a transaction amount, a beneficiary number, an IP address, a transaction type indicator, and a domain corresponding to the product.

103. The method of claim 101, wherein the merchant information includes at least one of the following types of information: a merchant telephone number, a merchant address, a merchant FAX number, a merchant e-mail address, a merchant principal name, a merchant home URL, and a merchant country.

104. The method of claim 101, wherein the transaction detail document comprises a customer feedback form, including the following fields for data entry by the user: account name, e-mail address, subject, and comments.

105. The method of claim 104, wherein the customer feedback form includes a hyperlink that a user activates to send the form to at least one of the server computers.

106. The method of claim 101, wherein the transaction detail document comprises a message to the user inviting comments by e-mail and giving an e-mail address.

107. The method of claim 101, wherein the transaction detail document further comprises a message to the user inviting comments by FAX and giving a FAX number.

108. The method of claim 16, wherein a digital advertising document is provided to the client computer.

* * * * *

EXHIBIT E



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(12) **United States Patent**
Levergood et al.

(10) **Patent No.:** **US 7,272,639 B1**
(45) **Date of Patent:** ***Sep. 18, 2007**

(54) **INTERNET SERVER ACCESS CONTROL
AND MONITORING SYSTEMS**

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This patent is subject to a terminal dis-
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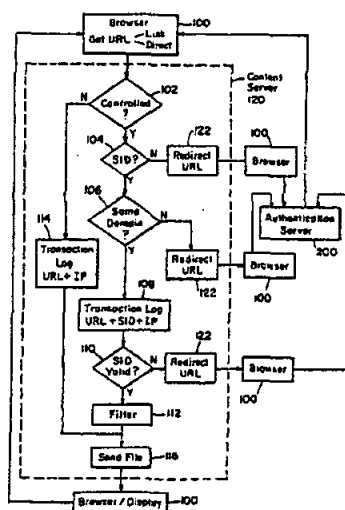
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(57) **ABSTRACT**

This invention relates to methods for controlling and moni-
toring access to network servers. In particular, the process
described in the invention includes client-server sessions
over the Internet. In this environment, when the user
attempts to access an access-controlled file, the server sub-
jects the request to a secondary server which determines
whether the client has an authorization or valid account.
Upon such verification, the user is provided with a session
identification which allows the user to access to the
requested file as well as any other files within the present
protection domain.

79 Claims, 7 Drawing Sheets



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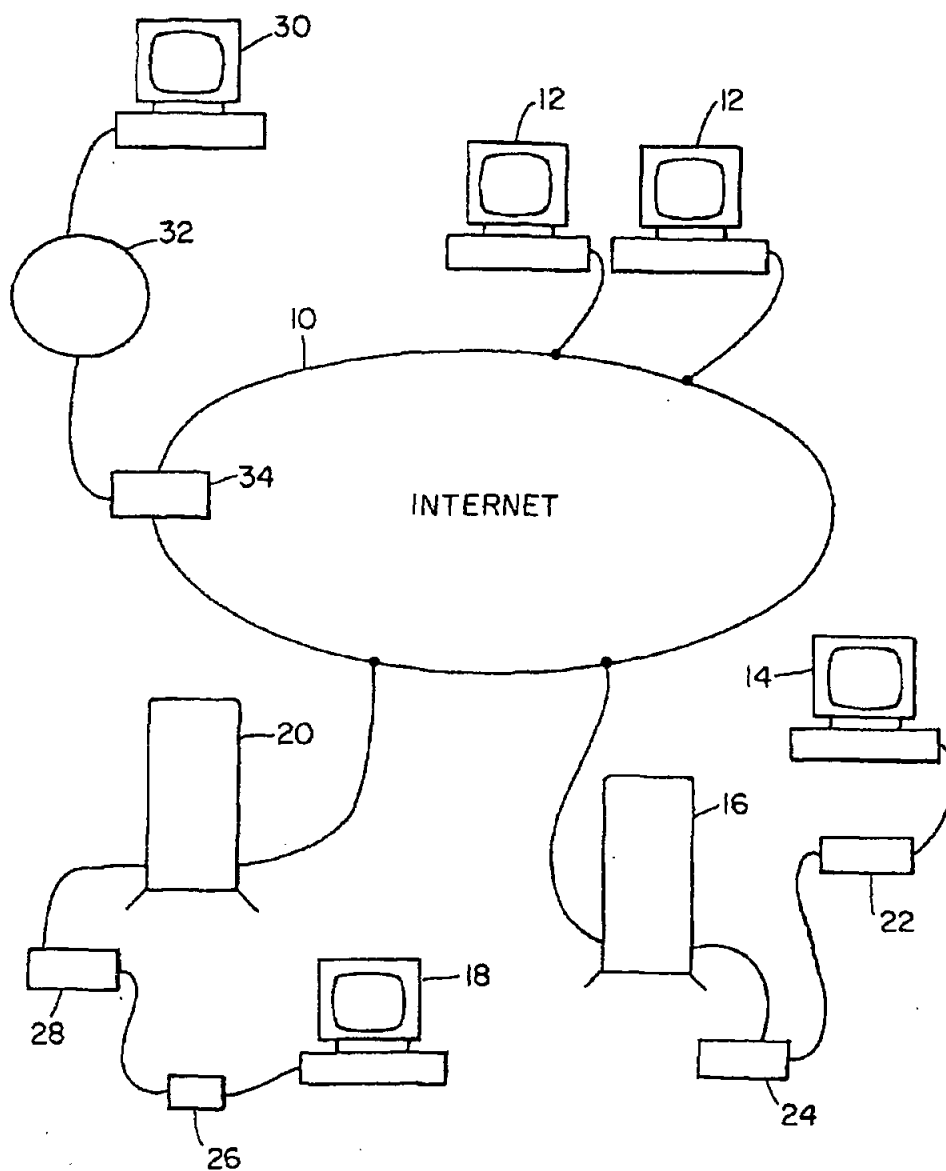


FIG. 1

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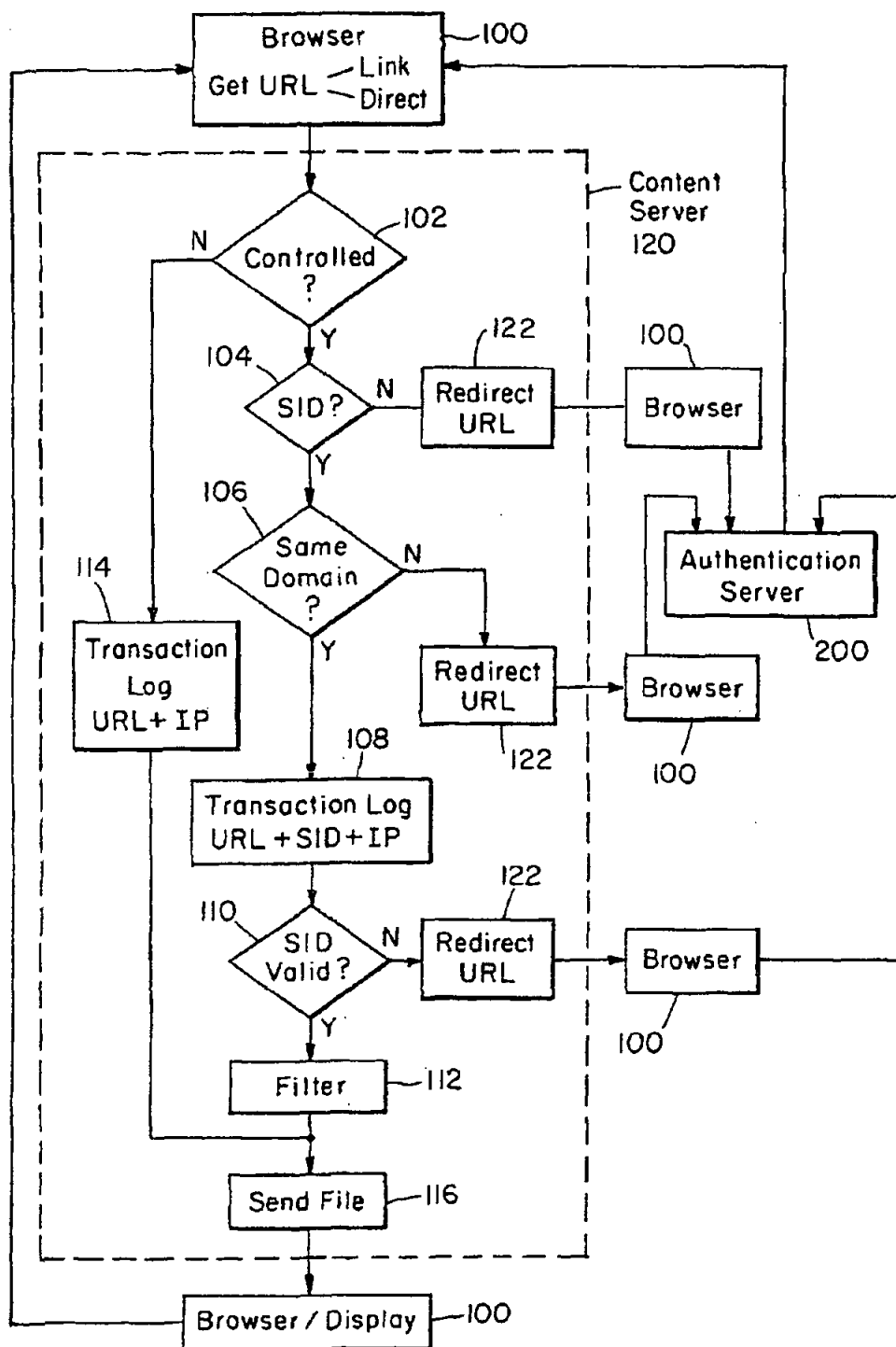


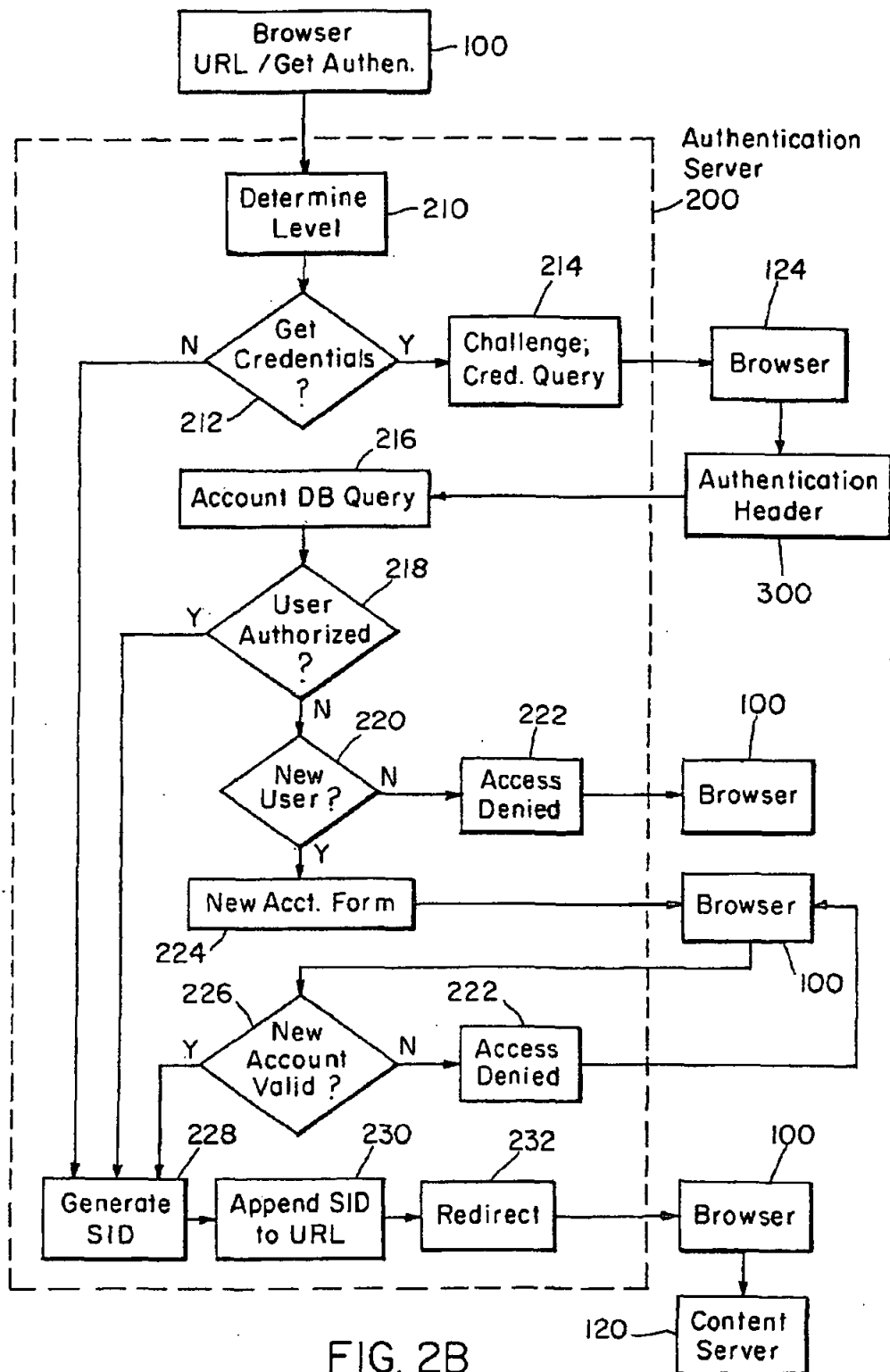
FIG. 2A

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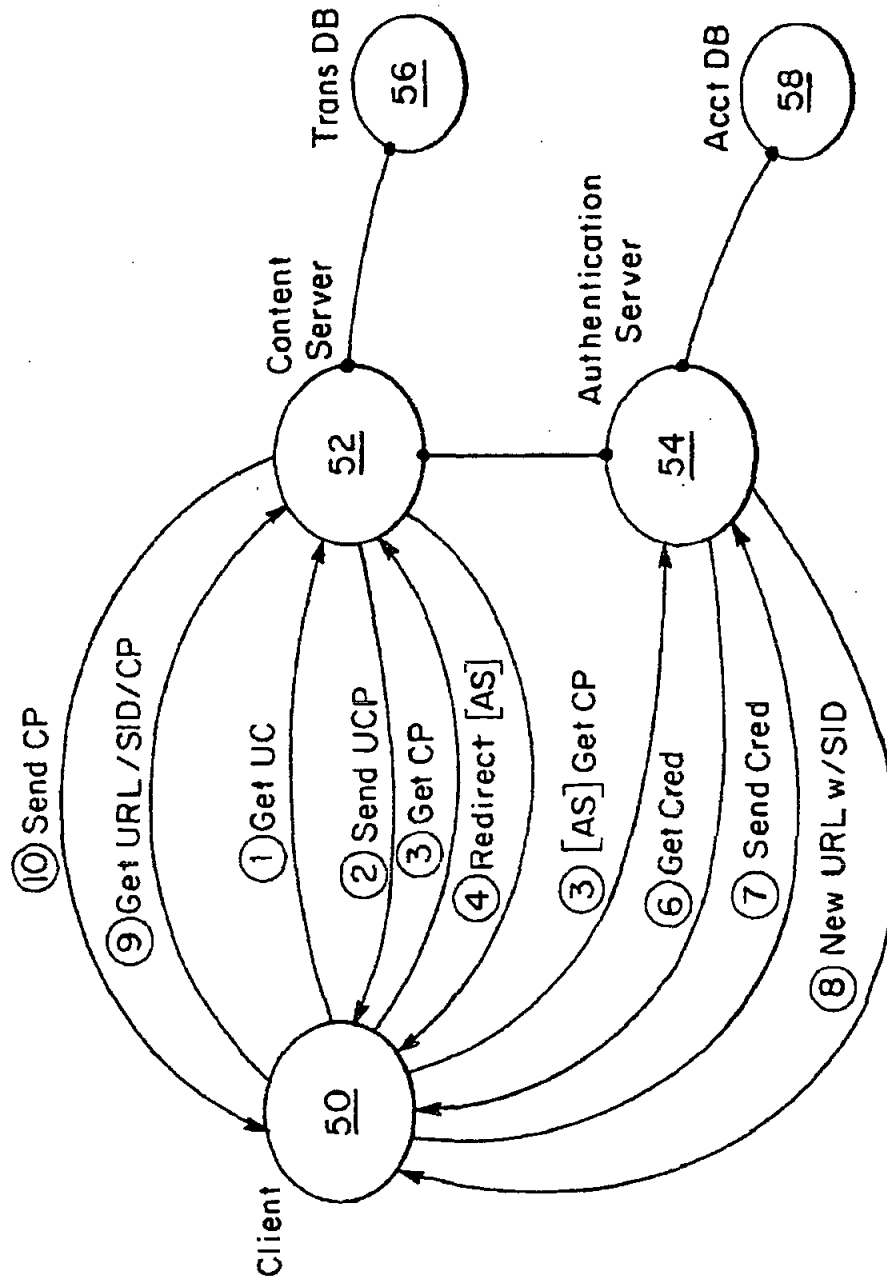


FIG. 3

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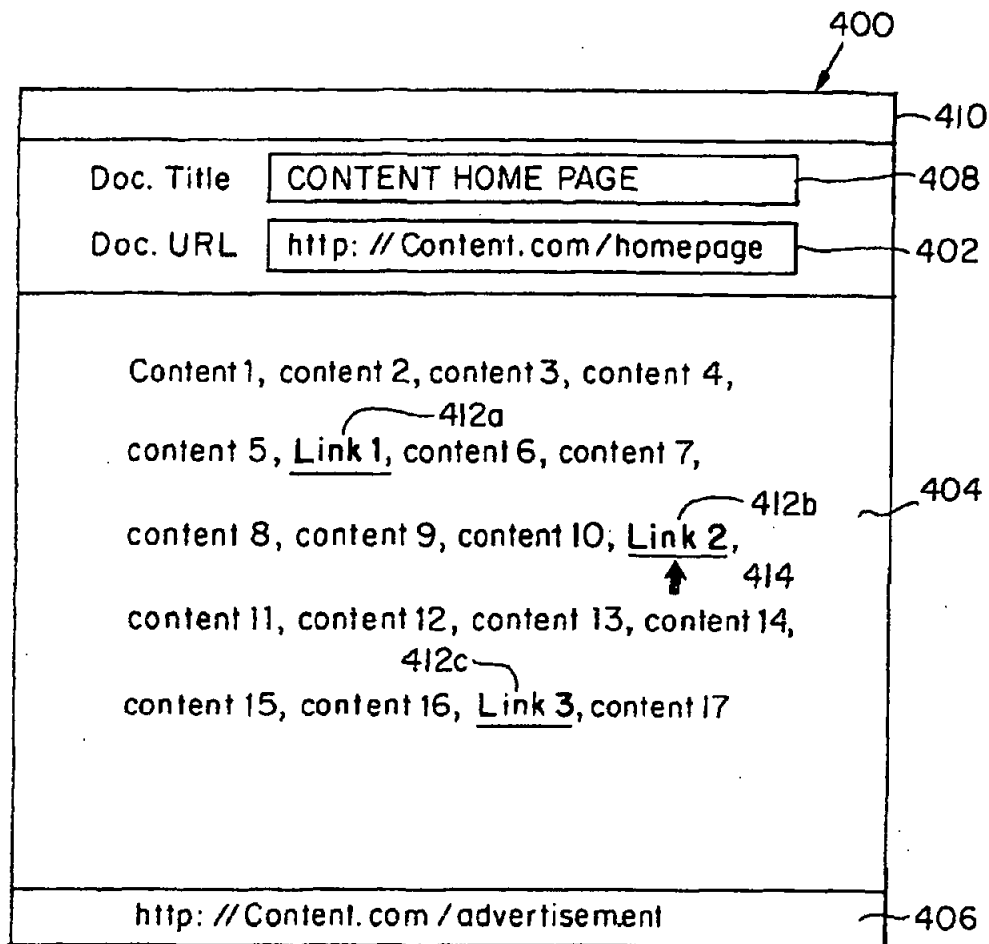


FIG. 4

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FIG. 5

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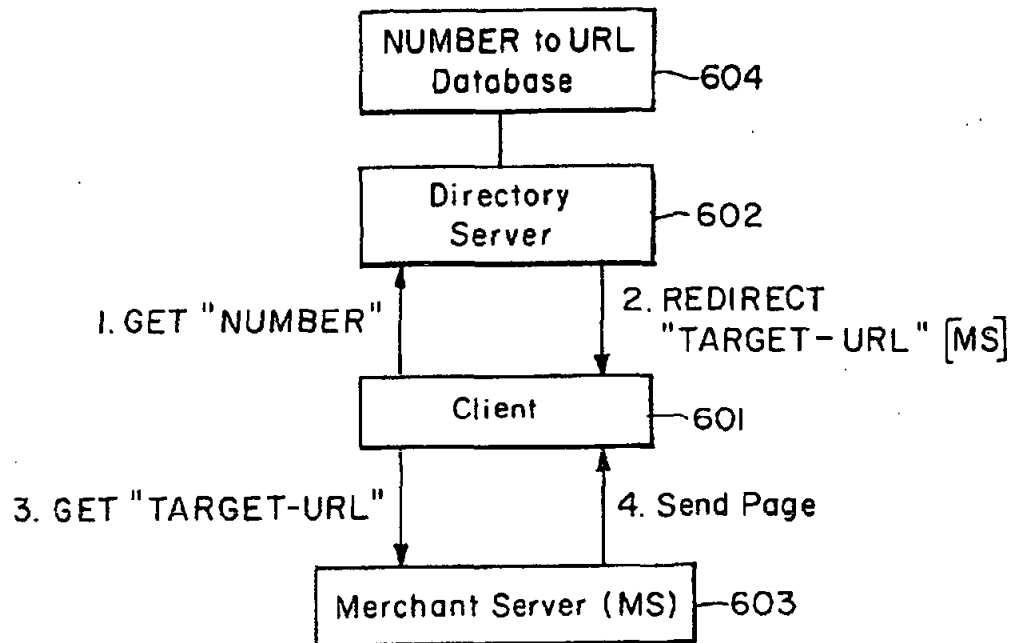


FIG. 6

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INTERNET SERVER ACCESS CONTROL
AND MONITORING SYSTEMS

RELATED APPLICATION

This application is a Continuation of U.S. Ser. No. 08/474, 096, filed Jun. 7, 1995, now U.S. Pat. No. 5,708,780 the entire teachings of which are incorporated herein by reference.

BACKGROUND TO THE INVENTION

The Internet, which started in the late 1960s, is a vast computer network consisting of many smaller networks that span the entire globe. The Internet has grown exponentially, and millions of users ranging from individuals to corporations now use permanent and dial-up connections to use the Internet on a daily basis worldwide. The computers or networks of computers connected within the Internet, known as "hosts", allow public access to databases featuring information in nearly every field of expertise and are supported by entities ranging from universities and government to many commercial organizations.

The information on the Internet is made available to the public through "servers". A server is a system running on an Internet host for making available files or documents contained within that host. Such files are typically stored on magnetic storage devices, such as tape drives or fixed disks, local to the host. An Internet server may distribute information to any computer that requests the files on a host. The computer making such a request is known as the "client", which may be an Internet-connected workstation, bulletin board system or home personal computer (PC).

TCP/IP (Transmission Control Protocol/Internet Protocol) is one networking protocol that permits full use of the Internet. All computers on a TCP/IP network need unique ID codes. Therefore, each computer or host on the Internet is identified by a unique number code, known as the IP (Internet Protocol) number or address, and corresponding network and computer names. In the past, an Internet user gained access to its resources only by identifying the host computer and a path through directories within the host's storage to locate a requested file. Although various navigating tools have helped users to search resources on the Internet without knowing specific host addresses, these tools still require a substantial technical knowledge of the Internet.

The World-Wide Web (Web) is a method of accessing information on the Internet which allows a user to navigate the Internet resources intuitively, without IP addresses or other technical knowledge. The Web dispenses with command-line utilities which typically require a user to transmit sets of commands to communicate with an Internet server. Instead, the Web is made up of hundreds of thousands of interconnected "pages", or documents, which can be displayed on a computer monitor. The Web pages are provided by hosts running special servers. Software which runs these Web servers is relatively simple and is available on a wide range of computer platforms including PC's. Equally available is a form of client software, known as a Web "browser", which is used to display Web pages as well as traditional non-Web files on the client system. Today, the Internet hosts which provide Web servers are increasing at a rate of more than 300 per month, en route to becoming the preferred method of Internet communication.

Created in 1991, the Web is based on the concept of "hypertext" and a transfer method known as "HTTP" (Hy-

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pertext Transfer Protocol). HTTP is designed to run primarily over TCP/IP and uses the standard Internet setup, where a server issues the data and a client displays or processes it. One format for information transfer is to create documents using Hypertext Markup Language (HTML). HTML pages are made up of standard text as well as formatting codes which indicate how the page should be displayed. The Web client, a browser, reads these codes in order to display the page. The hypertext conventions and related functions of the world wide web are described in the appendices of U.S. patent application Ser. No. 08/328,133, filed on Oct. 24, 1994, by Payne et al. which is incorporated herein by reference.

Each Web page may contain pictures and sounds in addition to text. Hidden behind certain text, pictures or sounds are connections, known as "hypertext links" ("links"), to other pages within the same server or even on other computers within the Internet. For example, links may be visually displayed as words or phrases that may be underlined or displayed in a second color. Each link is directed to a web page by using a special name called a URL (Uniform Resource Locator). URLs enable a Web browser to go directly to any file held on any Web server. A user may also specify a known URL by writing it directly into the command line on a Web page to jump to another Web page.

The URL naming system consists of three parts: the transfer format, the host name of the machine that holds the file, and the path to the file. An example of a URL may be:

`http://www.college.univ.edu/Adir/Bdir/Cdir/page.html,`

where "http" represents the transfer protocol; a colon and two forward slashes (://) are used to separate the transfer format from the host name; "www.college.univ.edu" is the host name in which "www" denotes that the file being requested is a Web page; "/Adir/Bdir/Cdir" is a set of directory names in a tree structure, or a path, on the host machine; and "page.html" is the file name with an indication that the file is written in HTML.

The Internet maintains an open structure in which exchanges of information are made cost-free without restriction. The free access format inherent to the Internet, however, presents difficulties for those information providers requiring control over their Internet servers. Consider for example, a research organization that may want to make certain technical information available on its Internet server to a large group of colleagues around the globe, but the information must be kept confidential. Without means for identifying each client, the organization would not be able to provide information on the network on a confidential or preferential basis. In another situation, a company may want to provide highly specific service tips over its Internet server only to customers having service contracts or accounts.

Access control by an Internet server is difficult for at least two reasons. First, when a client sends a request for a file on a remote Internet server, that message is routed or relayed by a web of computers connected through the Internet until it reaches its destination host. The client does not necessarily know how its message reaches the server. At the same time, the server makes responses without ever knowing exactly who the client is or what its IP address is. While the server may be programmed to trace its clients, the task of tracing is often difficult, if not impossible. Secondly, to prevent unwanted intrusion into private local area networks (LAN), system administrators implement various data-flow control mechanisms, such as the Internet "firewalls", within their networks. An Internet firewall allows a user to reach the

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Internet anonymously while preventing intruders of the outside world from accessing the user's LAN.

SUMMARY OF THE INVENTION

The present invention relates to methods of processing service requests from a client to a server through a network. In particular the present invention is applicable to processing client requests in an HTTP (Hypertext Transfer Protocol) environment, such as the World-Wide Web (Web). One aspect of the invention involves forwarding a service request from the client to the server and appending a session identification (SID) to the request and to subsequent service requests from the client to the server within a session of requests. In a preferred embodiment, the present method involves returning the SID from the server to the client upon an initial service request made by the client. A valid SID may include an authorization identifier to allow a user to access controlled files.

In a preferred embodiment, a client request is made with a Uniform Resource Locator (URL) from a Web browser. Where a client request is directed to a controlled file without an SID, the Internet server subjects the client to an authorization routine prior to issuing the SID, the SID being protected from forgery. A content server initiates the authorization routine by redirecting the client's request to an authentication server which may be at a different host. Upon receiving a redirected request, the authentication server returns a response to interrogate the client and then issues an SID to a qualified client. For a new client, the authentication server may open a new account and issue an SID thereafter. A valid SID typically comprises a user identifier, an accessible domain, a key identifier, an expiration time such as date, the IP address of the user computer, and an unforgeable digital signature such as a cryptographic hash of all of the other items in the SID encrypted with a secret key. The authentication server then forwards a new request consisting of the original URL appended by the SID to the client in a REDIRECT. The modified request formed by a new URL is automatically forwarded by the client browser to the content server.

When the content server receives a URL request accompanied by an SID, it logs the URL with the SID and the user IP address in a transaction log and proceeds to validate the SID. When the SID is so validated, the content server sends the requested document for display by the client's Web browser.

In the preferred embodiment, a valid SID allows the client to access all controlled files within a protection domain without requiring further authorization. A protection domain is defined by the service provider and is a collection of controlled files of common protection within one or more servers.

When a client accesses a controlled Web page with a valid SID, the user viewing the page may want to traverse a link to view another Web page. There are several possibilities. The user may traverse a link to another page in the same path. This is called a "relative link". A relative link may be made either within the same domain or to a different domain. The browser on the client computer executes a relative link by rewriting the current URL to replace the old controlled page name with a new one. The new URL retains all portions of the old, including the SID, except for the new page name. If the relative link points to a page in the same protection domain, the SID remains valid, and the request is honored. However, if the relative link points to a controlled page in a different protection domain, the SID is no longer valid, and

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the client is automatically redirected to forward the rewritten URL to the authentication server to update the SID. The updated or new SID provides access to the new domain if the user is qualified.

The user may also elect to traverse a link to a document in a different path. This is called an "absolute link". In generating a new absolute link, the SID is overwritten by the browser. In the preferred embodiment, the content server, in each serving of a controlled Web page within the domain, filters the page to include the current SID in each absolute URL on the page. Hence, when the user elects to traverse an absolute link, the browser is facilitated with an authenticated URL which is directed with its SID to a page in a different path. In another embodiment, the content server may forego the filtering procedure as above-described and redirect an absolute URL to the authentication server for an update.

An absolute link may also be directed to a controlled file in a different domain. Again, such a request is redirected to the authentication server for processing of a new SID. An absolute link directed to an uncontrolled file is accorded an immediate access.

In another embodiment, a server access control may be maintained by programming the client browser to store an SID or a similar tag for use in each URL call to that particular server. This embodiment, however, requires a special browser which can handle such communications and was generally not suitable for early browser formats common to the Web. However, it may now be implemented in cookie compatible browsers.

Another aspect of the invention is to monitor the frequency and duration of access to various pages both controlled and uncontrolled. A transaction log within a content server keeps a history of each client access to a page including the link sequence through which the page was accessed. Additionally, the content server may count the client requests exclusive of repeated requests from a common client. Such records provide important marketing feedback including user demand, access pattern, and relationships between customer demographics and accessed pages and access patterns.

The above and other features of the invention including various novel details of construction and combinations of parts will now be more particularly described with reference to the accompanying drawings and pointed out in the claims. It will be understood that the particular devices and methods embodying the invention are shown by way of illustration only and not as limitations of the invention. The principles and features of this invention may be employed in varied and numerous embodiments without departing from the scope of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a diagram illustrating the Internet operation.

FIG. 2A is a flowchart describing the preferred method of Internet server access control and monitoring.

FIG. 2B is a related flowchart describing the details of the authentication process.

FIG. 3 illustrates an example of a client-server exchange session involving the access control and monitoring method of the present invention.

FIG. 4 is an example of a World Wide Web page.

FIG. 5 is an example of an authorization form page.

FIG. 6 is a diagram describing the details of the translation of telephone numbers to URLs.

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DETAILED DESCRIPTION OF THE
INVENTION

Referring now to the drawings, FIG. 1 is a graphical illustration of the Internet. The Internet 10 is a network of millions of interconnected computers 12 including systems owned by Internet providers 16 and information systems (BBS) 20 such as Compuserve or America Online. Individual or corporate users may establish connections to the Internet in several ways. A user on a home PC 14 may purchase an account through the Internet provider 16. Using a modem 22, the PC user can dial up the Internet provider to connect to a high speed modem 24 which, in turn, provides a full service connection to the Internet. A user 18 may also make a somewhat limited connection to the Internet through a BBS 20 that provides an Internet gateway connection to its customers.

FIG. 2A is a flowchart detailing the preferred process of the present invention and FIG. 4 illustrates a sample Web page displayed at a client by a browser. The page includes text 404 which includes underlined link text 412. The title bar 408 and URL bar 402 display the title and URL of the current web page, respectively. As shown in FIG. 4, the title of the page is "Content Home Page" and the corresponding URL is "http://content.com/homepage". When a cursor 414 is positioned over link text 412b, the page which would be retrieved by clicking a mouse is typically identified in a status bar 406 which shows the URL for that link. In this example the status bar 406 shows that the URL for the pointed link 412b is directed to a page called "advertisement" in a commercial content server called "content". By clicking on the link text, the user causes the browser to generate a URL GET request at 100 in FIG. 2A. The browser forwards the request to a content server 120, which processes the request by first determining whether the requested page is a controlled document 102. If the request is directed to an uncontrolled page, as in "advertisement" page in this example, the content server records the URL and the IP address, to the extent it is available, in the transaction log 114. The content server then sends the requested page to the browser 116 for display on the user computer 117.

If the request is directed to a controlled page, the content server determines whether the URL contains an SID 102. For example, a URL may be directed to a controlled page name "report", such as "http://content.com/report", that requires an SID. If no SID is present, as in this example, the content server sends a "REDIRECT" response 122 to the browser 100 to redirect the user's initial request to an authentication server 200 to obtain a valid SID. The details of the authentication process are described in FIG. 2B and will be discussed later, but the result of the process is an SID provided from the authentication server to the client. In the above example, a modified URL appended with an SID may be: "http://content.com/[SID]/report". The preferred SID is a sixteen character ASCII string that encodes 96 bits of SID data, 6 bits per character. It contains a 32-bit digital signature, a 16-bit expiration date with a granularity of one hour, a 2-bit key identifier used for key management, an 8-bit domain comprising a set of information files to which the current SID authorizes access, and a 22-bit user identifier. The remaining bits are reserved for expansion. The digital signature is a cryptographic hash of the remaining items in the SID and the authorized IP address which are encrypted with a secret key which is shared by the authentication and content servers.

If the initial GET URL contains a SID, the content server determines whether the request is directed to a page within

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the current domain 106. If the request having a SID is directed to a controlled page of a different domain, the SID is no longer valid and, again, the user is redirected to the authentication server 122.

If the request is for a controlled page within the current domain, the content server proceeds to log the request URL, tagged with SID, and the user IP address in the transaction log 108. The content server then validates the SID 110. Such validation includes the following list of checks: (1) the SID's digital signature is compared against the digital signature computed from the remaining items in the SID and the user IP address using the secret key shared by the authentication and content servers; (2) the domain field of the SID is checked to verify that it is within the domain authorized; and (3) the EXP field of the SID is checked to verify that it is later than the current time.

If the validation passes, the content server searches the page to be forwarded for any absolute URL links contained therein 112, that is, any links directed to controlled documents in different content servers. The content server augments each absolute URL with the current SID to facilitate authenticated accesses across multiple content servers. The requested page as processed is then transmitted to the client browser for display 117. The user viewing the requested Web page may elect to traverse any link on that page to trigger the entire sequence again 100.

FIG. 2B describes the details of the authentication process. The content server may redirect the client to an authentication server. The REDIRECT URL might be: "http://auth.com/authenticate?domain=[domain]&URL=http://content.com/report". That URL requests authentication and specifies the domain and the initial URL. In response to the REDIRECT, the client browser automatically sends a GET request with the provided URL.

Whenever the content server redirects the client to the authentication server 200, the authentication server initiates the authorization process by validating that it is for an approved content server and determining the level of authentication required for the access requested 210. Depending on this level, the server may challenge the user 212 for credentials. If the request is for a low level document, the authentication may issue an appropriate SID immediately 228 and forego the credential check procedures. If the document requires credentials, the authentication server sends a "CHALLENGE" response which causes the client browser to prompt the user for credentials 214. A preferred credential query typically consists of a request for user name and password. If the user is unable to provide a password, the access is denied. The browser forms an authorization header 300 from the information provided, and resends a GET request to the authentication server using the last URL along with an authorization header. For example, a URL of such a GET request may be: "http://auth.com/authenticate?domain=[domain]&URL=http://content.com/report" and the authorization header may be: "AUTHORIZE: [authorization]".

Upon receiving the GET request, the authentication server queries an account database 216 to determine whether the user is authorized 218 to access the requested document. A preferred account database may contain a user profile which includes information for identifying purposes, such as client IP address and password, as well as user demographic information, such as user age, home address, hobby, or occupation, for later use by the content server. If the user is authorized, an SID is generated 228 as previously described. If the user is not cleared for authorization, the authentication server checks to see if the user qualifies for a new account

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220. If the user is not qualified to open a new account, a page denying access 222 is transmitted to the client browser 100. If the user is qualified, the new user is sent a form page such as illustrated in FIG. 5 to initiate a real-time on-line registration 224. The form may, for example, require personal information and credit references from the user. The browser is able to transmit the data entered by the user in the blanks 502 as a "POST" message to the authentication server. A POST message causes form contents to be sent to the server in a data body other than as part of the URL. If the registration form filled out by the new user is valid 226, an appropriate SID is generated 228. If the registration is not valid, access is again denied 222.

An SID for an authorized user is appended ("tagged") 230 to the original URL directed to a controlled page on the content server. The authentication server then transmits a REDIRECT response 232 based on the tagged URL to the client browser 100. The modified URL, such as "http://content.com/[SID]/report" is automatically forwarded to the content server 120.

FIG. 3, illustrates a typical client-server exchange involving the access control and monitoring method of the present invention. In Step 1, the client 50 running a browser transmits a GET request through a network for an uncontrolled page (UCP). For example, the user may request an advertisement page by transmitting a URL "http://content.com/advertisement", where "content.com" is the server name and "advertisement" is the uncontrolled page name. In Step 2, the content server 52 processes the GET request and transmits the requested page, "advertisement". The content server also logs the GET request in the transaction database 56 by recording the URL, the client IP address, and the current time.

In Step 3, the user on the client machine may elect to traverse a link in the advertisement page directed to a controlled page (CP). For example, the advertisement page may contain a link to a controlled page called "report". Selecting this link causes the client browser 50 to forward a GET request through a URL which is associated with the report file "http://content.com/report". The content server 52 determines that the request is to a controlled page and that the URL does not contain an SID. In Step 4, the content server transmits a REDIRECT response to the client, and, in Step 5, the browser automatically sends the REDIRECT URL to the authentication server 54. The REDIRECT URL sent to the authentication server may contain the following string:

"http://auth.com/authenticate?domain=[domain]
&URL=http://content.com/report"

The authentication server processes the REDIRECT and determines whether user credentials (CRED) are needed for authorization. In Step 6, the authentication server transmits a "CHALLENGE" response to the client. As previously described, typical credentials consist of user name and password. An authorization header based on the credential information is then forwarded by the client browser to the authentication server. For example, a GET URL having such an authorization header is: "http://auth.com/authenticate?domain=[domain]&URL=http://content.com/report and the authorization header may be: "AUTHORIZE: [authorization]". The authentication server processes the GET request by checking the Account Database 58. If a valid account exists for the user, an SID is issued which authorizes access to the controlled page "report" and all the other pages within the domain.

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As previously described, the preferred SID comprises a compact ASCII string that encodes a user identifier, the current domain, a key identifier, an expiration time, the client IP address, and an unforgeable digital signature. In Step 8, the authentication server redirects the client to the tagged URL, "http://content.com/[SID]/report", to the client. In Step 9, the tagged URL is automatically forwarded by the browser as a GET request to the content server. The content server logs the GET request in the Transaction database 56 by recording the tagged URL, the client IP address, and the current time. In Step 10, the content server, upon validating the SID, transmits the requested controlled page "report" for display on the client browser.

According to one aspect of the present invention, the content server periodically evaluates the record contained in the transaction log 56 to determine the frequency and duration of accesses to the associated content server. The server counts requests to particular pages exclusive of repeated requests from a common client in order to determine the merits of the information on different pages for ratings purposes. By excluding repeated calls, the system avoids distortions by users attempting to "stuff the ballot box."

In one embodiment, the time intervals between repeated requests by a common client are measured to exclude those requests falling within a defined period of time.

Additionally, the server may, at any given time, track access history within a client-server session. Such a history profile informs the service provider about link traversal frequencies and link paths followed by users. This profile is produced by filtering transaction logs from one or more servers to select only transactions involving a particular user ID (UID). Two subsequent entries, A and B, corresponding to requests from a given user in these logs represent a link traversal from document A to document B made by the user in question. This information may be used to identify the most popular links to a specific page and to suggest where to insert new links to provide more direct access. In another embodiment, the access history is evaluated to determine traversed links leading to a purchase of a product made within commercial pages. This information may be used, for example, to charge for advertising based on the number of link traversals from an advertising page to a product page or based on the count of purchases resulting from a path including the advertisement. In this embodiment, the server can gauge the effectiveness of advertising by measuring the number of sales that resulted from a particular page, link, or path of links. The system can be configured to charge the merchant for an advertising page based on the number of sales that resulted from that page.

According to another aspect of the present invention, a secondary server, such as the authentication server 200 in FIG. 2B, may access a prearranged user profile from the account database 216 and include information based on such a profile in the user identifier field of the SID. In a preferred embodiment, the content server may use such an SID to customize user requested pages to include personalized content based on the user identifier field of the SID.

In another aspect of the invention, the user may gain access to domain of servers containing journals or publications through a subscription. In such a situation, the user may purchase the subscription in advance to gain access to on-line documents through the Internet. The user gains access to a subscribed document over the Internet through the authorization procedure as described above where an authorization indicator is preferably embedded in a session identifier. In another embodiment, rather than relying on a

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prepaid subscription, a user may be charged and billed each time he or she accesses a particular document through the Internet. In that case, authorization may not be required so long as the user is fully identified in order to be charged for the service. The user identification is most appropriately embedded in the session identifier described above.

In another aspect of the invention, facilities are provided to allow users to utilize conventional telephone numbers or other identifiers to access merchant services. These merchant services can optionally be protected using SIDs. In a preferred embodiment, as shown in FIG. 6, a Web browser client 601 provides a "dial" command to accept a telephone number from a user, as by clicking on a "dial" icon and inputting the telephone number through the keyboard. The browser then constructs a URL of the form "http://directory.net/NUMBER", where NUMBER is the telephone number or other identifier specified by the user. The browser then performs a GET of the document specified by this URL, and contacts directory server 602, sending the NUMBER requested in Message 1.

In another embodiment, implemented with a conventional browser, client 601 uses a form page provided by directory server 601 that prompts for a telephone number or other identifier in place of a "dial" command, and Message 1 is a POST message to a URL specified by this form page.

Once NUMBER is received by directory server 601, the directory server uses database 604 to translate the NUMBER to a target URL that describes the merchant server and document that implements the service corresponding to NUMBER. This translation can ignore the punctuation of the number, therefore embedded parenthesis or dashes are not significant.

In another embodiment an identifier other than a number may be provided. For example, a user may enter a company name or product name without exact spelling. In such a case a "soundex" or other phonetic mapping can be used to permit words that sound alike to map to the same target URL. Multiple identifiers can also be used, such as a telephone number in conjunction with a product name or extension.

In Message 2, Directory server 602 sends a REDIRECT to client 601, specifying the target URL for NUMBER as computed from database 604. The client browser 601 then automatically sends Message 3 to GET the contents of this URL. Merchant server 603 returns this information in Message 4. The server 602 might have returned a Web page to the client to provide an appropriate link to the required document. However, because server 602 makes a translation to a final URL and sends a REDIRECT rather than a page to client 601, the document of message 4 is obtained without any user action beyond the initial dial input.

The Target URL contained in Message 3 can be an ordinary URL to an uncontrolled page, or it can be a URL that describes a controlled page. If the Target URL describes a controlled page then authentication is performed as previously described. The Target URL can also describe a URL that includes an SID that provides a preauthorized means of accessing a controlled page.

Among benefits of the "dial" command and its implementation is an improved way of accessing the Internet that is compatible with conventional telephone numbers and other identifiers. Merchants do not need to alter their print or television advertising to provide an Internet specific form of contact information, and users do not need to learn about URLs.

In the approach a single merchant server can provide multiple services that correspond to different external "tele-

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phone numbers" or other identifiers. For example, if users dial the "flight arrival" number they could be directed to the URL for the arrival page, while, if they dial the "reservations" number, they would be directed to the URL for the reservations page. A "priority gold" number could be directed to a controlled page URL that would first authenticate the user as belonging to the gold users group, and then would provide access to the "priority gold" page. An unpublished "ambassador" number could be directed to a tagged URL that permits access to the "priority gold" page without user authentication.

This invention has particular application to network sales systems such as presented in U.S. patent application Ser. No. 08/328,133, filed Oct. 24, 1994, by Payne et al. which is incorporated herein by reference.

EQUIVALENTS

Those skilled in the art will know, or be able to ascertain using no more than routine experimentation, many equivalents to the specific embodiments or the invention described herein. These and all other equivalents are intended to be encompassed by the following claims.

What is claimed is:

1. A method of processing service requests from a client to a server system through a network, said method comprising the steps of forwarding a service request from the client to the server system, wherein communications between the client and server system are according to hypertext transfer protocol;

returning a session identifier from the server system to the client, the client storing the session identifier for use in subsequent distinct requests to the server system; and appending the stored session identifier to each of the subsequent distinct requests from the client to the server system.

2. A method as claimed in claim 1 wherein the session identifier includes a user identifier.

3. A method as claimed in claim 1 wherein the session identifier includes an expiration time for the session.

4. A method as claimed in claim 1 wherein the server system records information from the session identifier in a transaction log in the server system.

5. A method as claimed in claim 4 wherein the server system tracks the access history of sequences of service requests within a session of requests.

6. A method as claimed in claim 5 wherein the server system tracks the access history to determine service requests leading to a purchase made within the session of requests.

7. A method as claimed in claim 4 wherein the server system counts requests to particular services exclusive of repeated requests from a common client.

8. A method as claimed in claim 4 wherein the server system maintains a data base relating customer information to access patterns.

9. A method as claimed in claim 8 wherein the information includes customer demographics.

10. A method as claimed in claim 1 wherein the server system assigns the session identifier to an initial service request to the server system.

11. A method as claimed in claim 1 wherein the server system subjects the client to an authorization routine prior to issuing the session identifier and the session identifier is protected from forgery.

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12. A method as claimed in claim 1 wherein the server system comprises plural servers including an authentication server which provides session identifiers for service requests to multiple servers.

13. A method as claimed in claim 12 wherein:

a client directs a service request to a first server which is to provide the requested service;

the first server checks the service request for a session identifier and only services a service request having a valid session identifier, and where the service request has no valid identifier;

the first server returns a response to the client, the response redirecting the service request from the client to the authentication server;

the authentication server subjects the client to an authorization routine and issues the session identifier to be appended to the service request to the first server;

the client forwards the service request appended with the session identifier to the first server; and

the first server recognizes the session identifier and services the service request to the client; and

the client appends the session identifier to subsequent service requests to the server system and is serviced without further authorization.

14. A method as claimed in claim 13 wherein the session identifier includes a user identifier.

15. A method as claimed in claim 13 wherein the session identifier includes an expiration time for the session.

16. A method as claimed in claim 13 wherein the session identifier provides access to a protected domain to which the session has access authorization.

17. A method as claimed in claim 16 wherein the session identifier is modified for access to a different protected domain.

18. A method as claimed in claim 13 wherein the session identifier provides a key identifier for key management.

19. A method as claimed in claim 13 wherein the server system records information from the session identifier in a transaction log in the server system.

20. The method of claim 1 wherein the access rights of the client are fully contained within the session identifier.

21. A method as claimed in claim 1 wherein a service request is for a document and the session identifier includes a user identification, further comprising:

returning the requested document wherein the document is customized for a particular user based on the user identification of the session identifier.

22. A method as claimed in claim 1 wherein a service request is for a document which has been purchased by a user, the session identifier comprises an authorization identifier, and further comprising:

returning the requested document if the authorization identifier indicates that the user is authorized to access the document.

23. A method as claimed in claim 1 wherein a service request is for a document wherein the session identifier comprises a user identifier, and further comprising:

returning the requested document to the client; and charging the user identified in the identifier for access to the document.

24. The method of claim 1, wherein at least one service request comprises a request for a document which has been purchased by a user, and wherein the session identifier comprises an authorization identifier, the method further comprising:

returning the requested document if the authorization identifier indicates that the user is authorized to access the document.

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25. A method as claimed in claim 24, wherein the authorization identifier is encoded within a session identifier which is appended to the request.

26. The method of claim 24 wherein the authorization identifier is provided by authentication server.

27. The method of claim 24, further comprising:

identifying the user from the authorization identifier; and automatically charging the identified user for the document.

28. The method of claim 24, wherein the document is returned electronically.

29. The method of claim 24, wherein a physical copy of the document is sent.

30. The method of claim 24, wherein the authorization identifier is appended to uniform resource locator.

31. The method of claim 1, wherein at least one service request comprises a request for a document, wherein the session identifier is designated by the server system, said method further comprising the steps of:

returning the requested document to the client; and charging the user identified in the session identifier for access to the document.

32. A method as claimed in claim 31, wherein a user identifier is encoded within a session identifier which is appended to the request.

33. The method of claim 1 wherein the session identifier is cryptographically generated.

34. The method of claim 1 further comprising:

returning a response to the client, the response redirecting an initial service request to an authentication server, the authentication server providing the session identifier.

35. The method of claim 1, wherein the session identifier is appended to at least one path name in a document returned by the server system.

36. The method of claim 35, wherein the at least one path name is in a link in the returned document.

37. The method of claim 36 wherein the link is an absolute link.

38. The method of claim 36 wherein the link comprises a uniform resource locator.

39. The method of claim 35 wherein the step of appending the session identifier comprises filtering the requested document.

40. The method of claim 35 wherein the session identifier is cryptographically generated.

41. The method of claim 35 wherein the session identifier is directed to an accessible domain.

42. The method of claim 35 wherein the session identifier comprises an expiration time.

43. The method of claim 35 wherein the session identifier comprises a date.

44. The method of claim 35 wherein the session identifier comprises a key identifier.

45. The method of claim 35 wherein the session identifier comprises an address of the client.

46. The method of claim 35 wherein the session identifier comprises a digital signature.

47. The method of claim 1, wherein the session identifier is designated by the server system, further comprising the steps of:

validating, at the server system, the appended session identifier; and

returning a controlled document if the appended session identifier is valid.

48. The method of claim 47 wherein the session identifier is cryptographically generated.

49. The method of claim 47 wherein the session identifier is directed to an accessible domain.

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50. The method of claim 47 wherein the session identifier comprises an expiration time.

51. The method of claim 47 wherein the session identifier comprises a date.

52. The method of claim 47 wherein the session identifier comprises a key identifier.

53. The method of claim 47 wherein the session identifier comprises an address of the client.

54. The method of claim 47 wherein the session identifier comprises an unforgeable digital signature.

55. The method of claim 47 wherein the session identifier facilitates authenticated accesses across multiple content servers.

56. The method of claim 47 wherein the document is customized for a particular user based on a user identification of the session identifier.

57. The method of claim 47, wherein the session identifier is appended to at least one path name in a document returned by the server system.

58. The method of claim 57 wherein the step of appending the session identifier comprises filtering the requested document.

59. The method of claim 1, further comprising:
servicing a request; and
automatically charging a user identified by the session identifier for the service provided.

60. The method of claim 1, wherein at least one service request comprises a purchase request, the purchase request including an associated user identifier, the method further comprising:

accessing, upon receipt of the purchase request at the server system, user information associated with the user identifier sufficient to charge to an account associated with the user, the purchase price of the product identified by the purchase request;

charging the user for the product identified by the purchase request according to the user information; and
fulfilling the purchase request based on the user information.

61. The method of claim 60, wherein the client includes the user identifier in a session identifier appended to the purchase request.

62. The method of claim 1, further comprising:
under control of a client system, displaying information identifying a product; and

in response to a user selection of a hyperlink associated with a product desired to be purchased, sending a request to purchase the item along with an identifier of a purchaser of the item to a server system; and

under control of the server system, upon receiving the request, retrieving additional information previously stored for the purchaser identified by the identifier in the received request;

charging the user the purchase price of the product; and
fulfilling the request for the product.

63. The method of claim 1, wherein the session identifier is appended by the client.

64. The method of claim 63, wherein the session identifier is cryptographically generated.

65. The method of claim 1, wherein a service request comprises a request to purchase a product.

66. The method of claim 65, wherein the product is transmitted over the network.

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67. The method of claim 66, wherein the product is a newspaper/newsletter article.

68. The method of claim 65, wherein the product is a durable product.

69. An information system on a network, comprising:

means for receiving service requests from a client and for determining whether a service request includes a session identifier, wherein communications to and from the client are according to hypertext transfer protocol;

means for providing the session identifier in response to an initial service request from the client in a session of requests;

means for storing, at the client, the session identifier for use in each communication to the server system;

means for appending the stored session identifier to each of subsequent communications from the client to the server system; and

means for servicing the subsequent service requests.

70. The information system of claim 69 wherein access rights of the client are fully contained within the session identifier.

71. An information system as claimed in claim 69 wherein the means for providing the session identifier is in a server system which services the requests.

72. An information system as claimed in claim 69 further comprising an authorization routine for authorizing the client prior to issuing the session identifier and means for protecting the session identifier from forgery.

73. An information server system as claimed in claim 69 further comprising a transaction log for recording information from the session identifier.

74. An information system as claimed in claim 69 further comprising means for tracking access history of sequences of service requests within the session of requests.

75. An information system as claimed in claim 69 further comprising means for counting requests to particular services exclusive of repeated requests from a common client.

76. An information system as claimed in claim 69 further comprising a data base relating customer information to access patterns.

77. An information system as claimed in claim 76 wherein the information includes customer demographics.

78. A method of processing, in a server system, service requests from a client to the server system through a network, said method comprising the steps of:

receiving, from the client, a service request to which a session identifier stored at the client has been appended by the client, wherein communications between the client and server system are according to hypertext transfer protocol;

validating the session identifier appended to the service request; and servicing the service request if the appended session identifier is valid.

79. The method of claim 78, further comprising, in the server system:

receiving an initial service request from the client;

creating, responsive to the initial service request, the session identifier; and

returning the session identifier to the client for storage by the client for use in subsequent distinct requests to the server system.

* * * * *

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CIVIL COVER SHEET

LED

JS 44 (Rev. 11/04)

The JS 44 civil cover sheet and the information contained herein neither replace nor supplement the filing and service of pleadings or other papers as required by law, except as provided by local rules of court. This form, approved by the Judicial Conference of the United States in September 1974, is required for the use of the Clerk of Court for the purpose of initiating the civil docket sheet. (SEE INSTRUCTIONS ON THE REVERSE OF THE FORM.)

I. (a) PLAINTIFFS

Soverain Software LLC

(b) County of Residence of First Listed Plaintiff Cook

(EXCEPT IN U.S. PLAINTIFF CASES)

NOV - 2 2007

DAVID J. MALAND, CLERK

(c) Attorney's (Firm Name, Address, and Telephone Number)

Kenneth R. Adamo, JONES DAY, 2727 North Harwood Street,
Dallas, Texas 75201-1515, Telephone: 214-220-3939

DEFENDANTS

CDW Corporation, Newegg Inc., Redcats USA, Inc., Systemax Inc.,
and Zappos.com, Inc.

County of Residence of First Listed Defendant

(IN U.S. PLAINTIFF CASES ONLY)

NOTE: IN LAND CONDEMNATION CASES, USE THE LOCATION OF THE
LAND INVOLVED.

Attorneys (If Known)

II. BASIS OF JURISDICTION (Place an "X" in One Box Only)

☐ 1 U.S. Government
Plaintiff

☒ 3 Federal Question
(U.S. Government Not a Party)

☐ 2 U.S. Government
Defendant

☐ 4 Diversity
(Indicate Citizenship of Parties in Item III)

III. CITIZENSHIP OF PRINCIPAL PARTIES (Place an "X" in One Box for Plaintiff and One Box for Defendant)

Citizen of This State ☐ 1 ☐ 1 Incorporated or Principal Place
of Business In This State ☐ 4 ☐ 4

Citizen of Another State ☐ 2 ☐ 2 Incorporated and Principal Place
of Business In Another State ☐ 5 ☐ 5

Citizen or Subject of a ☐ 3 ☐ 3 Foreign Nation ☐ 6 ☐ 6

IV. NATURE OF SUIT (Place an "X" in One Box Only)

CONTRACT	TORTS	FORFEITURE/PENALTY	BANKRUPTCY	OTHER STATUTES
<input type="checkbox"/> 110 Insurance <input type="checkbox"/> 120 Marine <input type="checkbox"/> 130 Miller Act <input type="checkbox"/> 140 Negotiable Instrument <input type="checkbox"/> 150 Recovery of Overpayment & Enforcement of Judgment <input type="checkbox"/> 151 Medicare Act <input type="checkbox"/> 152 Recovery of Defaulted Student Loans (Excl. Veterans) <input type="checkbox"/> 153 Recovery of Overpayment of Veteran's Benefits <input type="checkbox"/> 160 Stockholders' Suits <input type="checkbox"/> 190 Other Contract <input type="checkbox"/> 195 Contract Product Liability <input type="checkbox"/> 196 Franchise	PERSONAL INJURY <input type="checkbox"/> 310 Airplane <input type="checkbox"/> 315 Airplane Product Liability <input type="checkbox"/> 320 Assault, Libel & Slander <input type="checkbox"/> 330 Federal Employers' Liability <input type="checkbox"/> 340 Marine <input type="checkbox"/> 345 Marine Product Liability <input type="checkbox"/> 350 Motor Vehicle <input type="checkbox"/> 355 Motor Vehicle Product Liability <input type="checkbox"/> 360 Other Personal Injury	PERSONAL INJURY <input type="checkbox"/> 362 Personal Injury - Med. Malpractice <input type="checkbox"/> 365 Personal Injury - Product Liability <input type="checkbox"/> 368 Asbestos Personal Injury Product Liability PERSONAL PROPERTY <input type="checkbox"/> 370 Other Fraud <input type="checkbox"/> 371 Truth in Lending <input type="checkbox"/> 380 Other Personal Property Damage <input type="checkbox"/> 385 Property Damage Product Liability	<input type="checkbox"/> 610 Agriculture <input type="checkbox"/> 620 Other Food & Drug <input type="checkbox"/> 625 Drug Related Seizure of Property 21 USC 881 <input type="checkbox"/> 630 Liquor Laws <input type="checkbox"/> 640 R.R. & Truck <input type="checkbox"/> 650 Airline Regs. <input type="checkbox"/> 660 Occupational Safety/Health <input type="checkbox"/> 690 Other	<input type="checkbox"/> 422 Appeal 28 USC 158 <input type="checkbox"/> 423 Withdrawal 28 USC 157 PROPERTY RIGHTS <input type="checkbox"/> 820 Copyrights <input checked="" type="checkbox"/> 830 Patent <input type="checkbox"/> 840 Trademark
REAL PROPERTY <input type="checkbox"/> 210 Land Condemnation <input type="checkbox"/> 220 Foreclosure <input type="checkbox"/> 230 Rent Lease & Ejectment <input type="checkbox"/> 240 Torts to Land <input type="checkbox"/> 245 Tort Product Liability <input type="checkbox"/> 290 All Other Real Property	CIVIL RIGHTS <input type="checkbox"/> 441 Voting <input type="checkbox"/> 442 Employment <input type="checkbox"/> 443 Housing/ Accommodations <input type="checkbox"/> 444 Welfare <input type="checkbox"/> 445 Amer. w/Disabilities - Employment <input type="checkbox"/> 446 Amer. w/Disabilities - Other <input type="checkbox"/> 440 Other Civil Rights	PRISONER PETITIONS <input type="checkbox"/> 510 Motions to Vacate Sentence Habeas Corpus: <input type="checkbox"/> 530 General <input type="checkbox"/> 535 Death Penalty <input type="checkbox"/> 540 Mandamus & Other <input type="checkbox"/> 550 Civil Rights <input type="checkbox"/> 555 Prison Condition	LABOR <input type="checkbox"/> 710 Fair Labor Standards Act <input type="checkbox"/> 720 Labor/Mgmt. Relations <input type="checkbox"/> 730 Labor/Mgmt. Reporting & Disclosure Act <input type="checkbox"/> 740 Railway Labor Act <input type="checkbox"/> 790 Other Labor Litigation <input type="checkbox"/> 791 Empl. Ret. Inc. Security Act	SOCIAL SECURITY <input type="checkbox"/> 861 HIA (1395ff) <input type="checkbox"/> 862 Black Lung (923) <input type="checkbox"/> 863 DIWC/DIWW (405(g)) <input type="checkbox"/> 864 SSID Title XVI <input type="checkbox"/> 865 RSI (405(g)) FEDERAL TAX SUITS <input type="checkbox"/> 870 Taxes (U.S. Plaintiff or Defendant) <input type="checkbox"/> 871 IRS—Third Party 26 USC 7609
				<input type="checkbox"/> 400 State Reapportionment <input type="checkbox"/> 410 Antitrust <input type="checkbox"/> 430 Banks and Banking <input type="checkbox"/> 450 Commerce <input type="checkbox"/> 460 Deportation <input type="checkbox"/> 470 Racketeer Influenced and Corrupt Organizations <input type="checkbox"/> 480 Consumer Credit <input type="checkbox"/> 490 Cable/Sat TV <input type="checkbox"/> 810 Selective Service <input type="checkbox"/> 850 Securities/Commodities/ Exchange <input type="checkbox"/> 875 Customer Challenge 12 USC 3410 <input type="checkbox"/> 890 Other Statutory Actions <input type="checkbox"/> 891 Agricultural Acts <input type="checkbox"/> 892 Economic Stabilization Act <input type="checkbox"/> 893 Environmental Matters <input type="checkbox"/> 894 Energy Allocation Act <input type="checkbox"/> 895 Freedom of Information Act <input type="checkbox"/> 900 Appeal of Fee Determination Under Equal Access to Justice <input type="checkbox"/> 950 Constitutionality of State Statutes

V. ORIGIN

(Place an "X" in One Box Only)

☒ 1 Original Proceeding ☐ 2 Removed from State Court ☐ 3 Remanded from Appellate Court ☐ 4 Reinstated or Reopened ☐ 5 Transferred from another district (specify) ☐ 6 Multidistrict Litigation ☐ 7 Appeal to District Judge from Magistrate Judgment

VI. CAUSE OF ACTION

Cite the U.S. Civil Statute under which you are filing (Do not cite jurisdictional statutes unless diversity):
U.S. Civil Statute: 35 U.S.C. §§ 271, 281, 283, 284, 285

Brief description of cause:
Patent Infringement

VII. REQUESTED IN COMPLAINT:

☐ CHECK IF THIS IS A CLASS ACTION
UNDER F.R.C.P. 23

DEMAND \$

CHECK YES only if demanded in complaint:

JURY DEMAND: ☒ Yes ☐ No

VIII. RELATED CASE(S) IF ANY

(See instructions):

JUDGE

DOCKET NUMBER

DATE

SIGNATURE OF ATTORNEY OF RECORD

FOR OFFICE USE ONLY

RECEIPT # _____ AMOUNT _____ APPLYING IFP _____ JUDGE _____ MAG. JUDGE _____

A3131

CERTIFICATE OF FILING AND SERVICE

I hereby certify that on this 21st day of April, 2011, two bound copies of the Joint Appendix were served via UPS Next Day Air, to the following:

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I further certify that on this 21st day of April, 2011, the required number of copies of the Joint Appendix were hand filed at the Office of the Clerk, United States Court of Appeals for the Federal Circuit.

The necessary filing and service were performed in accordance with the instructions given me by counsel in this case.

A handwritten signature in black ink, appearing to read "Danielle Haley", is written over a horizontal line.

THE LEX GROUP^{DC}

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